An Address
ON THE
SIGNIFICANCE OF OCULAR SYMPTOMS.

Delivered before the Wimbledon Medical Society

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I HAVE chosen for my subject the significance of ocular symptoms, because, whatever our line of practice may be, it is obvious that our object is to do the best we can to relieve the patient's ailments, and the first step to be taken to attain this end is to find out what the patient is complaining of, in other words, to listen to his symptoms. This is often enough a tedious business, but I am sure it pays in the end to listen. Having heard the patient's symptoms, one should be able in a general way to estimate their significance and then ascertain by physical examination their special significance in this particular case.

PAIN.

Naturally the first symptom to deal with is pain. It is, of course, impossible to measure its severity; as good a guide as any is whether it keeps the patient awake at night or not. Pain in connexion with the eye of sufficient severity to prevent sleep, and at the same time associated with redness of the eye, suggests iritis, glaucoma, a foreign body, or abrasion of the cornea. The pain of iritis and glaucoma may be much the same—severe and deep-seated, round the eye, extending into the jaws, and occasionally producing vomiting. In the slighter cases of glaucoma it may be not severe enough to prevent sleep altogether and in such circumstances it usually disappears as a result of the sleep. So much importance is attached, and rightly so, to the fact that the pain of glaucoma usually prevents sleep, that the significance of a pretty severe eye pain which is relieved by sleep may be misunderstood. The condition of the pupil enables a diagnosis to be made between iritis and glaucoma—small in iritis, dilated in glaucoma—and I would point out the advisability of making a record in any given case of the state of the pupil before either eserine or atropine is instilled. It is in such cases as these that a second opinion may be asked for, and the difficulty of diagnosis is much increased if the state of the pupil at the time of the onset of the pain is not known. Pain due to a foreign body or abrasion is intense but spasmodic, coming on with the movement of the eyelids, and therefore, not uncommonly occurring at the moment of waking; a drop of fluorescin followed by cocaine is a most useful method of revealing the presence of an abrasion or foreign body.

If the eyeball is quite normal in appearance and yet is said to be the seat of severe pain, it is possible that the pain may be exaggerated; but it is worth while keeping in mind the possibility of the pain being a prodromal symptom of ophthalmic shingles. A few days will suffice to clear up the diagnosis.

Discomfort about the eye with a feeling of gravel or grit in it, sometimes described as a burning sensation getting worse in artificial light, indicates conjunctivitis, usually of a mild type. One of the commonest errors in my experience is the failure to recognise the condition known as spasmodic entropion. This occurs in elderly patients; the lashes of the lower lids roll in—do not grow in—and keep up a constant irritation of the lower part of the conjunctiva of the globe. The resultant conjunctivitis may be recognised and treated, but the cause is often overlooked.

Pain referred to the back of the eyes coming on *at once* when any close work such as reading or sewing is attempted may be a very troublesome symptom. It naturally suggests an error of refraction, or some want of muscle balance. Frequently in these patients the eyes are normal in all respects, and even if there be a little hypermetropia this would not account for the pain coming on at once and being referred to the back of the eyes. You are probably all familiar with these cases. Life is spoilt by the inability to use the eyes—all kinds of glasses are tried without avail—one person is consulted after the other. What, then, does this symptom indicate? The condition is one of local neurasthenia, an example of anxiety neurosis, and cannot be cured by any deliberate action of the will. The pain and disability persist until the attention becomes focused elsewhere; all the symptoms may vanish if a simple appendix operation be performed or the tonsils be enucleated.

HEADACHE.

Pain naturally leads to the consideration of headache. It is very easy to jump to the conclusion that a headache is due to an error of refraction and to neglect to search for some other possible cause. Before accepting the diagnosis of the ocular origin for a headache two conditions should be fulfilled. In the first place it is not every error of refraction that is likely to cause headache; simple myopia, for example, may cause aching eyes, but not a headache. Hypermetropia and astigmatism, especially of *low* degree, are the particular errors most prone to cause headache.

Secondly, headache of ocular origin should have the following characteristics:—

1. *Age.*—Ocular headaches are common in school life and up to middle age, but it is usually a mistake to attribute headache in a patient over 50 to eye-strain.

2. *Site: Usually Frontal or Supraorbital.*—Many patients quite definitely put their thumb and index finger on the mid-orbital points to indicate the seat of pain. Another common situation is at the back of the neck where it joins the head. On the other hand, headache referred to the vertex should not, I think, be attributed to an error of refraction.

3. *Periodicity.*—It frequently occurs on waking—gets better or even disappears after breakfast, returns as the day draws to a close, especially if the eyes are used for close work, but does not interfere with sleep.

It is perhaps worth while to spend a few minutes in explaining the morning headache of eye-strain, as the fact of waking with a headache after a night's rest is often thought to exclude the eyes as the cause of the headache. Ocular headache is due to excessive accommodation necessitated by the hypermetropic refraction. The accommodation is, of course, relaxed during sleep, but the actual act of waking necessitates an effort of accommodation on some very near object—the bed, the room—and later for shaving or doing the hair; and it is this sudden effort of accommodation that starts the headache. It follows from this that people who suffer in this way should get relief by putting on their glasses the moment they awake, and this is usually found to be the case.

Migraine.—True migraine is preceded by subjective visual sensations, sudden attacks of half-vision—fortification spectra, zig-zags, and so on—which the patient naturally enough attributes to the eyes. Children may be shy of telling their experiences. In some cases the aura is the sole phenomenon, no headache following. The significance of migraine is that although the symptoms are strikingly ocular in character it is the central nervous system which is at fault. It is maintained by some authorities that migraine can be cured by correcting the error of refraction. This is not my experience. Such errors should be corrected, but the treatment should not end there.

COMMON SUBJECTIVE SENSATIONS.

I would now draw attention to certain subjective sensations which are common and often give rise to much worry.

Floating Specks.—In the vast majority of cases these muscæ volitantes do not indicate any organic disease, the important point is to find out if the specks seen by the patient stand still or move when steadfastly looked at. The average patient is, of course, not a good observer. He probably replies: "Oh, they move with my eye." Get him to try to look at them. Muscæ always move—will not, as it were, stand being looked at. If there is the slightest doubt as to whether they move or not, a thorough ophthalmoscopic examination with the pupil dilated is necessary to clear up the diagnosis. Some people, usually those who are not very busy, are much worried by these muscæ, simply live round them, draw them at different times of the day, and are extraordinarily difficult to help. I think the first step is to make a thorough ophthalmoscopic examination and if the media are clear to assure them that the symptom is not a serious one, and try to persuade them to give up looking for the specks.

Seeing coloured rings round light—the light, for example, resulting from a struck match is often the occasion of the observation. This may be a trivial symptom or one of grave significance. It may merely indicate a watery eye, or simple conjunctivitis, or be a symptom of glaucoma. The production of the rainbow colours is in the former case due to a drop of water sticking on the cornea, in the latter to fluid imprisoned in the cornea, the result of the increase of tension. Careful examination should make it easy to differentiate between the two conditions. If there be no conjunctival discharge, no watery eye, coloured rings indicate glaucoma. Further examination will reveal increase of tension, haziness of cornea, &c.

Flashes of light—specially obvious in the dark—is not an uncommon symptom and may be due to several causes. In investigating it, first make sure that the patient is not describing the aura of migraine. The cause of the flash is some mechanical stimulation of the retina, so the symptom is always serious. If it occurs in a short-sighted individual, the chances are that a detachment of the retina is imminent, or is actually taking place, and a timely rest may prevent the occurrence of the detachment, and similarly the persistence of recurring flashes of light after a knock on the eye-ball, as from a tennis-ball, or the like, calls for careful examination and the need for physical rest. Apart from their occurrence in short-sighted eyes, flashes of light may be due to that very insidious disease, cyclitis—the inflammation in the ciliary body causing a minute pull on the front part of the retina. Therefore, the significance of flashes of light associated with misty vision is that the eye is probably the seat of cyclitis. Clearly the patient who experiences these flashes requires a very thorough examination of the eye; it is not a symptom to be regarded as trivial.

Dislike to light is more frequent than the preceding. This has a very varying significance. All are familiar with the intense photophobia and secondary spasm in the orbicularis that result from a corneal ulcer in a child, the spasm being more marked the more superficial the ulcer. It is always worth while in these cases to give a general anæsthetic, otherwise the force required to separate the lids to examine the cornea may do considerable harm. This may seem a too drastic procedure. But it is the only way to examine the eye thoroughly, and the anæsthesia is also useful for purposes of treatment. Short of this severe type, quite a number of people complain of inability to stand strong sunlight. Some of these will be found to have a fair complexion, fair hair, and more or less deficiency in the choroidal pigment, as seen by the ophthalmoscope. Frequently, too, they will be found to have a northern ancestry. It is this defect in the choroidal pigment that causes the dislike to light. It is important in considering this class of case to remember that the fair hair may become darker with advancing age, the pigmentation of the choroid, however, remaining deficient.

It is not always easy, but is sometimes very important, to distinguish this group from another group in which the symptoms are similar but are an expression of a neurasthenic condition—that is to say, people with a normally pigmented choroid and normal eyes may complain that they cannot stand bright sunlight or artificial light. It is very tempting to give these people tinted glasses. This, really, is the worse course to adopt, as they invariably require them darker and darker. They should be warned about this, and advised only to wear the tinted glasses on a very bright day.

Night-blindness usually indicates impaired nutrition or actual destruction of the retinal elements. It is a symptom of retinitis pigmentosa; it occurs also in syphilitic retinitis. In another group it is due to some general nutritional disorder, absence of fresh vegetables or vitamins, and these cases may be associated with a peculiar dry condition of the bulbar conjunctivæ. It is a well-marked symptom of scurvy, and was a familiar symptom when that disease was common. The symptom also occurs without any obvious retinal lesion as a congenital or familial disease. In this group the symptoms persist throughout life, but vision is not impaired. In the retinitis pigmentosa cases, vision slowly deteriorates and blindness ultimately results. In the war night-blindness was frequently complained of without any physical cause being discovered—a form of anxiety neurosis—the cause of which it is quite easy to understand. A form of night-blindness is experienced by very long-sighted people who wear strong convex glasses in the day-time with comfort but find they cannot see with them out of doors after dark. They should be advised to dispense with the glasses when out at night.

Seeing worse in a bright light is rather a striking and unexpected symptom, as it sounds odd to see better when the light is dull. It occurs usually after 45, and suggests tobacco neuritis or early optic atrophy, the strong light quickly fatigues the already exhausted nerve. In another and, perhaps, more common group, at any rate in private practice, the symptom is due to a small well-defined opacity in the lens, in the line of vision, usually at the posterior pole. Under the action of strong light the pupil contracts and the opacity then practically fills the pupillary area. The patient with such cataract will say that he cannot see anything on entering a room when he has to face the light, and his vision in the dark may suddenly turn to temporary blindness when he faces the headlights of a motor.

Colour-blindness is usually a congenital symptom. Acquired colour-blindness is a symptom of importance. It may be the earliest symptom of optic atrophy* or tobacco neuritis. Obviously an individual's habits or occupation will largely be responsible for the early recognition of this symptom. Artists, who are often great smokers, will notice it early, as will also gardeners or anyone who has to match colours.

Red vision occurs in two quite different conditions—in young school-children, and adults after a cataract has been extracted and cataract glasses have been worn. The child says the printed page suddenly looks red—the cataract patient finds the road, or sky, or trees looking red. Probably the explanation of the symptom is the same in both cases, the retinal vessels being situated in the anterior layers of the retina are traversed by the light on its way to the rods and cones. The eye is normally adapted for this red tinge, but if the vessels are congested, as they may be, from hypermetropia, or from too much light getting in the eye, in the absence of the lens the adaptation fails. The symptom is not serious and

* Possibly indicating tabes.

the treatment obvious. The cataract patient should avoid strong glare and use tinted glasses—the child should have the error of refraction corrected.

SYMPTOMS DUE TO REFRACTIVE ERRORS AND DEFECTS OF ACCOMMODATION.

The significance of the usual symptoms due to an error of refraction or defect in accommodation are sufficiently obvious and need not detain us, but there are some that are worth mentioning. Uncorrected long sight, in addition to producing the characteristic headache already referred to, is a common cause of head-tiredness and general fatigue, and may be a factor in causing irritability of temper. The point to remember is, that these persons do not complain of their sight, they see perfectly well, but examination shows their good vision is purchased by an abnormal effort of accommodation, and so it comes about that any depression of general health—for example, after influenza, or childbirth—brings these symptoms out and the temporary use of glasses may save much discomfort. I am often told that the patient has been advised to postpone having his eyes seen to until he is stronger. This is a fallacy. Glasses, by obviating the need for the constant effort of accommodation, help these debilitated people to recover more quickly. Similarly, children at the end of term complain in this way and are all right in the holidays.

The other point worth noting is that the defect of accommodation due to age (presbyopia) under average conditions begins at 45, and by 60 all accommodative power is lost. This means that reading glasses suitable for 60 should be suitable for the rest of life. Hence, when people over 60 begin to grumble at their glasses and demand stronger ones, the complaint is significant of some organic change in the eye, most likely early cataract, possibly senile choroiditis. The enterprising optician will supply the stronger glasses, and they may be of temporary benefit, but this course is not advisable until the fundus has been examined.

People about the age of 45 to 50 sometimes complain of an inability or difficulty in opening the eyes in the morning, not due to the lids being stuck together by discharge, they generally add that they have to lift the lids up with the fingers. This symptom, which may be called "*morning ptosis*," though sometimes due to ill-health, is frequently associated with uncorrected or insufficiently corrected presbyopia, and will disappear when proper glasses for close work are worn.

DOUBLE VISION AND MULTIPLE VISION.

Double vision should always be regarded as serious unless it be confined to one eye, a fact which should always be ascertained. It means something wrong with one or more of the muscles governing the eye movements and may indicate the beginning of serious disease of the central nervous system. A temporary form of double vision occurs sometimes after the eyes have been used for close work. It is not serious; indicates either the need for glasses or fresh glasses, and probably that the individual has been looking too close at the book or work, thereby producing over-convergence.

Multiple vision—for example, seeing three or more edges to the crescent moon or multiple lights when a single one is looked at—always signifies some early change in the lens. In this connexion there should be noted another symptom sometimes called "second sight." A person over 50 discovers that whereas he has hitherto had to use glasses for reading he can now do without them. This symptom is not so satisfactory as it seems. It means that some organic change is taking place in the lens, altering its refractive index. This change may or may not be visible with the ophthalmoscope. It may be due to glycosuria, and in any case of this kind the urine should be examined for sugar. If sugar be present the so-called second sight will be found to vary with the amount of sugar present at any particular time—that is to say, the ability to read without glasses will depend on the amount of sugar present. When sugar-free the patient needs his old glasses for near work. If he becomes careless about his diet the blood-sugar increases, the refractive index of the lens changes, and he can now read without glasses. Therefore, if an elderly patient complains that some days he is short-sighted and on other days he can see quite well at a distance, he is almost certainly the subject of glycosuria.

Closing one eye to read may indicate disease of that eye, but quite frequently is due to weakness of the power of convergence, a common condition in elderly people. The patient, knowing nothing of the real reason for his closing one eye, naturally concludes that that eye is the bad one and complains that he cannot see with it. As a matter of fact, he can see quite well with either eye separately, but not with the two together.

NYSTAGMUS, VERTIGO, AND VOMITING.

A rare symptom to be mentioned spontaneously by the patient is that fixed objects when looked at appear to move or to be unsteady. This is due to nystagmus, it indicates that it is of recent origin; congenital nystagmus never produces this effect.

Vertigo may be, but only rarely is, due to defect in muscle balance, either a definite squint of recent paralytic origin, or one which, *up to the present*, has been rendered latent by an unconscious effort of compensation, but which now has become obvious owing to some weakness or debility making such compensation impossible. A vertical deviation is more prone to produce giddiness than is a lateral one. A simple test for ocular vertigo is to note if the giddiness disappears when one eye is shut. If it does, it clearly is due to some defect in binocular vision. Much can be done in some cases of ocular vertigo by the use of prismatic glasses.

I have not yet mentioned what is perhaps the commonest of eye symptoms. We often hear a patient complain of *his eye being weak*. The use of this term generally indicates an absence of clear thinking or accurate observation and an attempt should be made to ascertain what the patient really means. One will mean a watery eye, another that he cannot see small print, yet another that he cannot stand strong light.

Vomiting, I suggest, should be included as an ocular symptom. I have known more than one case of glaucoma in which vomiting, not failure of sight, was the symptom which made the patient seek advice. Vomiting may be due also to the use of too strong eserine drops, and may accompany, or perhaps mask, some injury to the eye. Although strictly speaking not an ocular symptom, it is worth noting that the use of atropine or hyoscine drops may in susceptible subjects produce the symptoms of general poisoning, giddiness, restlessness, and even delirium; to prevent or diminish the risk of such occurrence drops should be instilled at the outer canthus and not over the lacrymal punctum.

PAPILLITIS.

Before concluding, I should draw your attention to what may seem an omission. You may have noticed that no mention has been made of papillitis (optic neuritis). Papillitis due, for example, to a tumour of the brain or to some toxæmic condition—renal disease or pregnancy—may exist for a considerable time without producing any effect on vision. Occasionally it may give rise to a *temporary* loss of vision, noticed, perhaps, on waking or on going from a well-lighted room to a darker one. The loss of vision may be so slight and temporary as not to call for much notice. The significance of these facts is obvious. The fundus should be examined in all cases of persistent headache, especially if it be of a severe character, even though there be no complaint of loss of vision. And similarly, if this apparently trivial symptom—temporary obscuration of vision—occur in the course of pregnancy associated with albuminuria, an examination of the fundus should be made at once. A timely termination of the pregnancy may prevent permanent loss of sight.

MINERS' NYSTAGMUS.[1]

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THE subject of miners' nystagmus has become one of considerable urgency on account of the numbers of men who are affected. It involves for them a period of bad health, sometimes of considerable duration and severity, and in addition there is an ever-increasing charge upon one of the most important industries of the country.

In the last few years the disease seems to have become much more prevalent than it was in my own student days. At the eye clinic in Glasgow, a town situated on the margin of the coal-fields of Lanarkshire and Dumbartonshire, a case of miners' nystagmus was occasionally seen, but very rarely. At that time there was no record kept by the State of the incidence of the disease. It was not within the province of any certifying surgeon. There was no miners' compensation, and therefore the State took no formal notice of its incidence. Accurate statistics have only been obtained within the last few years, and it is perhaps too soon to say whether the disease is definitely increasing or diminishing. Some time ago I communicated with the Ministry of Mines to know if the facts of the incidence of the disease had in any way been submitted to epidemiologists, and if any researches had been made as to the pathology of the malady, and I was told that no investigations in the latter direction had yet been carried out.

In this communication I desire to say something as to (*a*) the ætiology of the disease, (*b*) the management of patients afflicted with it, and (*c*) the legal aspects of the question.

Ætiology of the Disease.

Now, as regards the ætiology, there has been much excellent research work of a painstaking kind by numerous investigators in this and other countries. Great credit is due to many people, but particularly mention ought, I feel, to be made of the work of the late Mr. Simeon Snell, of Mr. Llewellyn, and more recently of Mr. Robson, so far as the United Kingdom is concerned. We have also had two Government reports on the subject, but I do not think that we have yet arrived at any certainty as to the causation of this malady. The origin of the disease has been attributed to such incidents in a collier's life as deficient illumination, constrained and cramped postures in working, inhalation of gases from certain kinds of coal. There can be no question as to the great merit of the work that has been done by numerous investigators, but, all the same, I fear that the verdict must be one of not proven.

To begin with, the connexion of miners' nystagmus with coal-mining is by no means a constant one. We have whole areas in which no cases seem to occur. It is very common in certain districts in the United Kingdom, very infrequent in others. It is common in some coal-fields on the continent, but is said to be unknown in the coal-pits of the United States and of South Africa. Now, in these areas there is no doubt that the miners work in cramped and strained positions. The illumination, of course, must be artificial, and presumably the chemical composition of coal, and therefore of the gases given off while it is being mined, is not very widely different in the different countries of the world. I have lately seen a case in which a miner had miners' nystagmus in Scotland. He went to the United States and worked there for some years, during which time he was quite free of the disease. On returning to Scotland and resuming work in the mine he was again attacked.

One remark must be made as to the change from what is known as the Glennie lamp to electric light. In my work as a medical referee I have frequently come across cases in which the sufferer from miners' nystagmus has definitely told me that the introduction of electric light was the first thing that made him give up working below ground. Up till the time of its introduction he had been able to work in comparative comfort with the ordinary Glennie lamp, but directly the electric light was introduced the glare made it quite impossible for him to continue at his occupation. That is a statement that I have very frequently received from colliers while examining them as a medical referee. To some extent the brilliant electric light seems to act as a detector of the presence of the disease. I am aware that it is maintained by trustworthy observers that the introduction of electric light has caused a diminution in the percentage of persons affected. I have no doubt as to the reliability and impartiality of the statements made, but I should be very glad to have accurate figures for the whole of the United Kingdom. I am not satisfied that all the painstaking work that has been done has solved the riddle, and therefore I have ventured to suggest that other lines of investigation, followed by persons who are competent for the work, might be of material assistance.

Symptoms.

My first proposition is that the disease is not one affecting the eyes alone, but that there are evidences of a more general involvement of cerebral centres. Everybody admits the characteristic movements of the eyes. Most people also know that there is a considerable amount of pain in the head. In my experience the pain is chiefly felt in the temples and forehead and in the occipital region. There are vertigo, muscular tremors, photophobia, night-blindness, and, in certain cases, special attitudes of the head; these are the usual symptoms with which everybody is familiar. There are other conditions which seem to me not to have received the attention which perhaps they should have received—namely, diminution of visual acuteness (in the proper sense of the term), and disturbances of the circulation. I almost invariably find the pulse rapid and weak and very frequently intermittent in rhythm. Such symptoms do not depend upon eye-strain. I can scarcely bring myself to believe that they depend upon illumination. It is perhaps conceivable that they may be associated with the long continuance of strained positions of the body, and I think they might also be associated with chronic poisoning by those gases on the action of which Mr. Robson, in his excellent monograph, lays stress, or by some other emanations of which we know nothing. It is because of this widespread involvement of nerve centres that it has seemed to me a possible explanation may be the presence of some micro-organism hitherto not discovered.

In May, 1924, as I have said, I wrote to the Mines Department, and learned that no investigations into the pathological conditions in persons suffering from miners' nystagmus had been made. I must say, considering the immense importance of the disease, alike to the sufferer and to the economic condition of the United Kingdom, I think it is high time that such investigations were made. No stone should be left unturned. The disease, so far as I know, is never fatal, but still post-mortem investigations might be made on persons who during life were known to have had it, and also there is no reason why, during the attacks, the condition of the cerebro-spinal fluid and of the blood should not be made the subject of investigation.

Diminished Visual Acuteness.

In a communication to the Ophthalmological Section of the Royal Society of Medicine,[2] I ventured to say that one of the most frequent symptoms was *diminution of visual acuteness*. Since that paper was given I have seen a very considerable number of patients,

[1] A paper read before the Glasgow Royal Medico-Chirurgical Society on May 1st, 1925.

[2] Proceedings of the Royal Society of Medicine, vol. xviii.

and I find the statement to be true. I am glad to be able to say that Mr. Llewellyn, in his able article in the *British Journal of Ophthalmology* for 1920, also mentions diminished visual acuity. I feel inclined to ascribe this defective visual acuteness to a central defect, and not merely to the oscillatory movements of the eyeballs. The visual acuteness remains defective even when the eyeballs are at rest between the paroxysms. I wish particularly to emphasise the fact that I use the word *visual acuteness* in the strict sense in which it ought always to be used. Visual acuteness is a matter almost entirely of macular function. At the conclusion of my communication, one of the gentlemen who took part in the discussion said that the vision in miners' nystagmus was not always bad, for he knew of a man with miners' nystagmus who could play a game of golf. That game does not require visual acuteness in the strict sense of the term, but only field vision. I have a near relative who has very defective central vision in each eye, who can only read with the aid of a strong magnifying glass and who has had on account of defective sight to study Braille, but who can fly-fish with some degree of success for trout and salmon. He can see the swirl of the water in the pool, he can see where the cast strikes the water, but he is quite unable to see the individual flies.

One other observation in this connexion seems to me to be of importance. Coal-mining does not require visual acuteness at all, at any rate in the sense in which I use that phrase. At the Toronto meeting of the British Medical Association and on various other occasions I have called attention to cases which I have seen of patients who had 10 diopters or more of myopia and who still had no difficulty in coal-mining. Suppose we take 10 diopters—and I have known miners with a considerably higher amount—the distant point of distinct vision is at 4 inches from their eyes. I would expect a person with that amount of myopia, provided the eyes are healthy, to read small type at a distance of approximately 4 inches from the eyes but not at a greater. At the same time, while so employed, he can quite well, with his peripheral vision, make himself aware of the various objects in the room. It is this field vision which is used for coal-mining and for almost every other form of manual work. To attempt to express capacity for manual work or even for navigation in terms of visual acuteness is to attempt the impossible. I myself have a visual acuteness without my lenses of 6/36 in each eye but not more, yet, as a matter of fact, I can pick up a buoy quite easily at a distance of two or even more miles, and, when looking at the test-types from a distance of six metres without my glasses, I can locate quite distinctly the line of letters corresponding to the distance of three metres, although I cannot read them. I have no difficulty whatever in seeing that there are black marks on the card at that distance, and were these an object to be avoided I would have no difficulty in doing so. It is this function that is used in almost every kind of manual work, coal-mining included. For that reason I beg most respectfully to differ from Sir J. Purves-Stewart in his well-known and admirable text-book on "Nervous Diseases." He seems to base his theory of the oscillations of miners' nystagmus on the idea that coal-mining depends upon visual acuteness. It does not; it depends upon the more general function which we may call field vision. Visual acuteness I define as a function almost entirely macular, and it is that function which we investigate when we estimate the punctum remotum and the punctum proximum of vision by the use of test-types. The other functions of vision I think should be called field vision, and it is on this field vision that a labourer or a collier depends for his work.

A somewhat similar error was made by an ingenious member of our profession who, some years ago, with a view to testing the visual acuteness of young children, caused to be made certain sizes of white ivory balls, throwing them on the floor to see if the child could pick them up. That was not a test of visual acuteness. It may have been a test of differences of light perception or even of colour perception, but one thing it certainly was not, and that is a test of visual acuteness.

Circulatory Disturbance.

In the next place I want to say that in miners' nystagmus the pulse-rate is often very high. I think that from observed cases I have been justified in forming the opinion that the pulse-rate varies very much with the intensity of the disease. Very frequently I find it 100 or even more than 100. In one or two cases it has been as much as 120. I have only twice got a case, since I began these observations, under 76. The pulse is generally taken before the examination commences and after it is finished, and frequently the pulse is found to be a little slower, although not materially, at the end of the examination. Furthermore, it is often very weak in character and not infrequently it is intermittent in beat. That also I think clearly points to the fact that miners' nystagmus is something more than a disease of the eye.

Paroxysmal Nature of the Attacks.

But another striking feature in many cases is that the attacks of giddiness and of pain, and even of the movements of the eyeballs, are paroxysmal. A patient feels extremely well and goes about quite freely till all of a sudden he takes an attack of acute pain in the head with giddiness. Such attacks are apt to come on when the patient makes any effort at stooping or when he makes much exertion. To this I shall return when I come to speak of the treatment of miners' nystagmus. These three features, the diminution, in the large bulk of cases, of the visual acuteness, the disturbances of the circulation, and the paroxysmal nature of the attacks, seem to me to make it impossible to regard this disease as purely ocular in origin. It is not; it is a much more general condition affecting a large number of centres.

Now I think it quite possible that it may be due to the inhalation of certain gases or other emanations, but I have some difficulty in accepting this view. As has already been pointed out, there are huge areas where the disease does not exist. Further, I doubt very much if we would get the paroxysmal features in the attacks if the cause be gas inhalation. I wish plainly to say that I will not deny the possibility of its being due to the inhalation of deleterious gases, but I do say this, that there is a large field of investigation which does not yet seem to have been touched and which I think ought to be investigated by pathologists, bacteriologists, and epidemiologists. That seems to me a reasonable demand. From all I can hear the disease is increasing considerably in this country. Years ago there was very little of it. Were the cause either defective light or cramped position or gas inhalation it is difficult to believe that the disease would be unknown in some areas and abundant in others; nor is it likely that it would for long periods, in some cases for years, affect its victim in a paroxysmal manner.

Given a tolerable state of recovery, there may be no fresh exposure to defective light or to cramped position or to gas inhalation and yet there are fresh manifestations of the symptoms at intervals. If the disease were due to the three above-mentioned conditions then the number of cases occurring each year should be approximately a constant.

That this is far from being the case the undernoted figures show. These give the numbers of persons receiving compensation for miners' nystagmus in the United Kingdom for the years mentioned.

1913	*1914*	*1919*	*1920*	*1921*	*1922*	*1923*
2401	2774	2718	2865	1913	4902	3872

In looking into the matter the question has arisen as to whether this is not a comparatively new disease. When I was a student and a junior practitioner in the Glasgow Eye Infirmary we rarely saw any cases. Dransart, one of the early writers on the subject, mentions only a few, and in his communication

(*Annales d'Oculist*, 1877) says that Alf. Graefe had recorded three cases and Nieden five. Charles Bell Taylor, who for many years was a well-known ophthalmic practitioner in Nottingham, in his paper (THE LANCET, 1875) was only able to record three cases.

Before leaving this part of the subject there is just one other point that I wish to mention. Some patients have miners' nystagmus and suffer very little inconvenience from it. Prof. E. L. Collis (THE LANCET, Feb. 28th, 1925) says that oscillation of the eyeballs is present without causing inconvenience in from 20 to 30 per cent. of miners working with poor illumination. He lays much stress on the presence of a neurasthenic element as being of great importance. He does not define what he means by a neurasthenic element and, till he does so, the phrase, though convenient, is without meaning. It seems more rational to say that the symptoms manifested in any particular case are chiefly conditioned by the centres of the brain affected by some morbid process hitherto unknown.

I cannot help thinking that the symptoms in great part point to the mid-brain and the occipital lobes as being often involved. There is also frequently pain in the temporal region of each side of the skull which is perhaps accounted for by the fact that the centres for the movements of the eyes are at the lower aspect of each anterior ascending frontal convolution.

I cannot but regard the cause of miners' nystagmus as being at present unknown. Therefore I desire, as expressed in my communication to the Royal Society of Medicine, that other lines of investigation should be followed particularly by epidemiologists, bacteriologists, and pathologists.

Treatment.

I wish very briefly to discuss the treatment of this somewhat mysterious affection. Unfortunately, as a medical referee, I only see patients at a tolerably late stage of the malady, and therefore the following remarks are not made with that fullness of knowledge of the evolution of the disease which is possessed by many colliery doctors.

The point which has given me the greatest anxiety is to determine when a man who is the subject of the disease is in a condition to resume work. So widespread is the disease that it has become a serious question in the economics of coal-mining. To some extent I have gained assistance by dividing the cases that come before me into two groups. The first contains cases in which the pulse is not rapid—i.e., not above 80 or 85 per minute; in which there is little or no pain in the head, either frontal or occipital, and in which the vision, after careful correction of errors of refraction, is something better than 6/18. Again, it may be repeated that a coal-miner does not use visual acuteness in the true sense of the term. Visual acuteness in this true sense is the function which is examined when the distances of the punctum proximum and the punctum remotum from the eye are determined by types. The coal-miner, unless he be of a scientific bent and examines the fossils which are to be found in the coal, never uses visual acuteness in coal-mining. The importance of a diminished visual acuteness is that, if my opinion be correct, it indicates the involvement of the apices of the occipital lobes in the pathological process. A miner who is a slight case as above defined is, in my opinion, fit for a certain amount of light work, probably even at a colliery. Such work, however, should not involve much stooping nor anything which demands great physical exertion. It seems to me that it is very desirable to get a man who is a light case back to some work; but at first to such work as will not entail exhaustion of nerve centres. Here we are brought up against a double difficulty: there is no definition or even understanding as to what is meant by the phrase "light work"; nor, so far as I am aware, is there any arrangement whereby a man who is recovering from miners' nystagmus can work only part of a shift. I quite agree that there is often a mental factor in the case. When this is so, then regular work of a suitable kind will help very materially in promoting restoration to health, by restoring a man's confidence in himself, by allowing him to find out that he is able for some work.

Many of my colleagues, whose opinions are worthy of all consideration, aver that miners' nystagmus is closely analogous to shell shock. While not admitting the analogy I would like to ask this question of those who hold that opinion: Were they actually treating cases of shell shock would they transport their patients to a battle-field or subject them to the roar of artillery with the view of promoting their recovery? Perhaps the law might be altered to allow a larger selection of forms of employment for such men; agricultural work might be found to be very suitable, as it is work in healthy out-of-door surroundings. In cases in which good progress has been made towards recovery then work on the surface at a colliery might be undertaken.

The object of all treatment should be to nurse the patient back to a normal state of mental and physical vigour. With that end in view, as soon as possible some work ought to be undertaken. A friendly understanding between employers and employed as to kinds of work available would be of great service and in most cases the patient himself might be consulted as to forms of work which he feels capable of undertaking.

The case is quite different when the attack is severe. Given a patient with a quick and feeble pulse, with severe attacks of giddiness, with severe pain in the head, and with a diminished visual acuteness, then I think that the patient must be considered as being seriously ill and the greatest care must be exercised in certifying that the patient is fit for work. No doubt there may be every now and again a malingerer—malingering can scarcely produce a pulse-rate of over 100 per minute—but so far as I am able to form an opinion the large majority of these patients are ill and very often severely ill. It is always to be remembered that the attacks are frequently paroxysmal, and that therefore the symptoms vary very much in intensity at different times. When a patient has unmistakably the disease in this severe form he ought not to be definitely certified as fit for work.

A man with symptoms which point to severe exhaustion or disturbance of nerve centres should, generally speaking, be given a period of rest from labour. But here a new danger arises, and it is that a man who for many years has followed an active life may, when put on the shelf, become despondent, and the mental element thus developed may interfere, and that materially, with recovery. Unless in the severest cases, patients suffering from this severe form of the disease should take a certain amount of out-of-door exercise, preferably on some country road or in the fields. So long as the disease is severe they require a guide wherever there is traffic. The presence of a guide is almost necessary, for no one can tell when the patient will have a paroxysmal attack. Even on a country road the presence of a companion is desirable, for it gives the patient a sense of safety and in addition helps to abolish the introspection which a solitary walk is apt to engender. While ample rest should be given, every effort should be made to prevent the patient moping for days or weeks together in bed. Alcohol in every form should be prohibited, and so should such a depressant as tobacco.

I think it would also be advantageous if arrangements could be made for sufferers from this disease to be under regular medical supervision. No doubt many of them are frequently seen by their panel doctors, who, in colliery districts, are very familiar with the disease in all its aspects and are well fitted to care for the patients; I desire, however, that each patient shall be visited at least once every fortnight by his panel doctor or by some reliable substitute.

I do not think that at present there is any great need for special clinics for such patients.

Legal Aspect: The Question of Unfitness for Work.

In some respects I would alter legal procedure in these cases. If a man has miners' nystagmus to the extent of having to give up work, there can be no difficulty in certifying that he is unable to earn full wages at the work at which he was employed. I cannot see any alternative to the giving of such a certificate when the patient has had to leave off work. But there is no provision made, so far as I can interpret the prescribed form, to indicate that a particular case is a slight one, and that, although the patient ought not to work below ground, yet that he may be able for certain forms of light work above ground.

The present process is as follows. A patient feels difficulty in vision and he avails himself of the services of his panel doctor. The doctor in turn diagnoses nystagmus and sends him to a certifying surgeon, who examines the patient carefully and grants a certificate to the effect that the patient is suffering from miners' nystagmus; he also fixes the date when the incapacity began. Frequently an appeal is made from the certifying surgeon to the medical referee. This involves a third examination of the patient and not infrequently a journey of a good number of miles. The medical referee is always provided with a copy of the original report by the certifying surgeon from which he gains some useful information as to the condition of the nystagmus at the date when the certificate was granted. Perhaps the chief advantage in having a second opinion is that occasionally a miner may have a nystagmus which is not miners' nystagmus. The present writer has seen a case in which a miner had nystagmus but at the same time had disseminated sclerosis. Further, an experienced ophthalmic surgeon can examine eyes on many points—e.g., as to refraction and as to the presence or absence of heterophoria.

There is a good deal to be said against an appeal from one individual to another, and there is a somewhat widely spread feeling that the appeal should be to a panel of three. There is much to recommend this suggestion; it would, however, enormously increase the cost. Perhaps a simpler, less expensive, and equally satisfactory way would be for the certifying surgeon—whose certificate has been impugned—and a doctor selected by the employers to examine the workman together and draw up a joint report. In the event of their not coming to an agreement as to the facts, then and then only would the medical referee be called upon to act.

When an agreement as to the facts has been arrived at either with or without the aid of the medical referee, then the agreement should hold good for at least six months, during which time the patient should be exempt from further medical examinations.

When the patient has recovered to the extent of being able for something then he should begin with some light work for a few hours daily; to a large extent he should be allowed to choose the nature of the work, and it ought not necessarily to be at a colliery. My own preference would be for light agricultural work. I would hesitate long before I certified a patient with a pulse-rate of anything between 90 and 120 as fit for any work which would require either much stooping or such strong muscular effort as would exhaust the nerve centres.

Not long ago a judge had before him the case of a workman who was supposed, after a serious eye condition, to be doing light work as a watchman. It transpired that he went on duty every winter afternoon at 4.30 and was not relieved till 7.30 the following morning. There was a special dispensation at the end of each week—he went on duty at 4.30 on Saturday night and was not relieved till 7.30 on the following Monday morning. I do not know what the learned judge's decision was, but he and myself as assessor were of opinion that some people have queer notions of what is meant by light work.

Miners' Nystagmus in America.

Since drafting the above paper I have received some communications from America that seem to me of great interest. While making myself acquainted with the European literature on miners' nystagmus, I thought it right also to communicate with a few friends on the other side of the Atlantic. I wrote to Prof. McCallum, the well-known biochemist in Montreal. He has, with great kindness, promised to communicate with persons connected with the coal industry in Canada, but as yet he is not in a position to give me any report on the matter. I also communicated with Dr. Duane, of New York, and with Dr. Webster Fox, of Philadelphia. Dr. Duane, in acknowledging receipt of my letter wrote, on April 10th of this year, as follows: "Miners' nystagmus is certainly rare in this country, as is shown by the total, or practically total, absence of reference to it in our literature. Apparently even in the coal-fields of Pennsylvania, where one would expect it, it is rare. I myself have never seen a case that I can recollect." Dr. Duane has very kindly promised to get me further information and is, I believe, having investigations made as to the conditions in the Pittsburg coal-pits.

I am deeply indebted to Dr. Webster Fox for kindly forwarding to me some literature published in America. He has sent to me four numbers of the Monthly Review of the U.S. Bureau of Labor Statistics, and, in addition, he has sent a very interesting paper entitled Miners' Nystagmus, by Frederick L. Hoffman, printed by the Government Printing Office, Washington, in 1916. This particular publication is one of great value. It is a very full and painstaking discussion of the whole subject, and the bibliographical references are of great importance because they are very full. I do not think I have seen a better synopsis of the history of miners' nystagmus than is contained in this publication. The author mentions, amongst other things, all the important work that has been done in Europe, giving full details of the very painstaking and elaborate researches of Llewellyn and Snell and Nieden, and of a considerable number of other Europeans who have written on the subject. What strikes me in these contributions coming from the United States, is that they all deal with European nystagmus, and the disease is almost never mentioned as occurring in the United States. So far as the information derived from the literature which I have perused throws any light on the subject, it is a disease practically unknown in America. There is one statistical investigation mentioned as having been conducted in Illinois. Five hundred miners working under conditions which would render them liable to nystagmus in this country were carefully examined and not a single case of miners' nystagmus found.

Hoffman, in his summary at the end of his contribution, has this important sentence: "No reasons suggest themselves, however, why this peculiar affliction should be limited to mining districts of European countries and not be found in American coal-mining districts, where, on account of the gaseous nature of the mines, the use of safety-lamps is compulsory." This sentence throws grave doubts on any theory of defective illumination being the cause. If safety-lamps produce nystagmus in the United Kingdom why do they not do so in the United States? Why have the hopes that electric lighting of coal-pits would abolish nystagmus not been fulfilled? If the inhalation of gas be the cause in South Wales and elsewhere why do the gaseous conditions of the pits in America not produce similar results?

THE TREATMENT OF GENERAL PARALYSIS AND TABES BY TRYPARSAMIDE.

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REMARKABLE results have been published in America from the use in syphilis of the nervous system of a new arsenical compound, tryparsamide, supplied by the Rockefeller Institute. This drug, which is a sodium salt of N-phenyl-glycineamid-p-arsenic acid (containing 25·0 per cent. of arsenic), was first prepared by Jacobs and Heidelberger in 1915. Experiments have shown that it has peculiar properties. Its spirochæticidal action is relatively feeble, but it has a marked tonic effect, it promotes recovery from toxic injury, and induces the healing of syphilitic lesions without increasing the liability to a generalised spread of the spirochæte. At the same time it has very little local or general irritant action upon the tissues, and cumulative effects are infrequent. Moreover, experiments indicate that it has a greater power of penetrating into the cerebro-spinal fluid than other arsenical preparations. The drug appears to be of value also in both human and animal trypanosomiasis. The sole disadvantage is a tendency to cause amblyopia which is usually transitory, but may rarely be permanent.

Through the kindness of Sir Frederick Mott a supply of tryparsamide from the Rockefeller Institute became available early last year at the Maudsley Hospital for the treatment of suitable cases of general paralysis and tabes. The number of cases treated up to date is, unfortunately, small, but it has been thought worth while to publish these results, a preliminary report upon which has already been laid before the Medical Research Council.

Type of Case under Treatment.

The cases were obtained from various sources. Some were referred by general practitioners or from other hospitals and infirmaries specially for this treatment, while others attended the out-patient department for the relief of symptoms which investigation proved to be due to neuro-syphilis. As this hospital is intended for early forms of mental disorder, and as all patients before admission must be capable of signifying their desire to undergo treatment, the cases in the present series were, for the most part, early, and the mental symptoms on admission comparatively mild. As will be seen, some had later to be sent elsewhere for detention under certificate. Beyond the fact, then, that the mental symptoms on admission were not so severe as to render removal to an asylum imperative, the cases were not specially selected. They are, on the whole, comparable to those reported by Lorenz, Loevenhart, Bleckwenn, and Hodges.[1] To quote these observers :—

> " In our work we include under paresis any case of syphilis of the central nervous system that has a certain physical symptom-complex and which is associated with definite mental symptoms of sufficient severity to warrant the conclusion that a psychosis exists. This psychosis may be varied in its symptoms ; most common is a general dilapidation shown by a lessened interest and capability with a proneness to confusion and faulty memory for recent events associated with an emotional instability bordering on a child-like happiness or simplicity. These placid mental states are frequently interrupted by sharp periods of excitement. In some cases a manic-like picture is seen, but most common and characteristic is a feeling of happiness or well-being. This may be actually expressed or evidenced by conduct and may be inferred from the topic of conversation selected by the patient or his general manner of speech. The carelessness and indifference of the patient relative to his immediate circumstances or the future are also characteristic mental symptoms of paresis. The classical picture of megalomania or delusions of great wealth, great physical strength, or great attainment are relatively uncommon to-day. This is probably due to our recognising paresis without these expansive ideas that were essential for the clinical picture as recognised years ago. To sum up, in the mental symptoms associated with the physical signs of tremors, disturbed deep reflexes, pupillary anomalies, speech defects, &c., that complete the picture of paresis, most stress would be laid on definite changes in character or personality, mental or intellectual indolence, mild or marked euphoria, memory disturbances, confusion, excitement, delusions, hallucinations, &c. In addition to this syndrome, a completely positive serology in both blood and spinal fluid in an untreated case adds the other elements essential for our diagnosis of paresis."

[1] Therapeutic Use of Tryparsamide in Neurosyphilis, Lorenz, W. F., et alia, Jour. Amer. Med. Assoc., May 26th, 1923, vol. lxxx., No. 21.

It will be seen that most of the cases described in the present series display features answering to the above description.

Method of Treatment.

In addition to the ordinary physical, mental, and serological examination special attention was paid to the condition of the optic discs and visual fields. In no case, however, was there detected any marked disturbance of vision either before or after treatment. It is to be noted that the cases of amblyopia reported had all received larger doses of tryparsamide than were given in the present series. In order that the drug might specially be tested, neither mercury nor bismuth was given, although these are said to intensify the action of tryparsamide. The drug was given in eight weekly doses of 2·0 g. dissolved in 5-10 c.cm. of distilled water intravenously or into the muscles ; the latter appears to be preferable as it is less quickly eliminated from the system. There is very little local irritation even when the drug is spilled outside the vein. Nor was there any general reaction except in one case who had a rigor several hours after one of his injections.

Table of Pathological Reactions Before and After Injections (First Course).

Case.	Wassermann.		Cells.	Protein mgr. %	Lange.	Clinically.
	Blood.	C.S.F.				
1	40 +	40 +	+ +	+ +	012344400	Par.
	40 +	40 +	N.d.	N.d.	N.d.	Imp.
2	20	40	Few.	Slight.	N.d.	Par.
	Sl. +	4 +	10	Excess.	54000000	Imp.
3	40	40	+ +	+ +	Comp. pptn.	T.-par.
	40	8 +	+ +	+ +	Paretic curve.	Not imp.
4	8 +	20 +	+	+	N.d.	Tabes.
	Sl. +	4 +	Few.	90	4433210000	Imp.
5	20 +	40 +	+ +	+ +	555552200	Par.
	40 +	20 +	+ +	+ +	555550000	Imp.
6	40 +	40 +	+ +	+ +	N.d.	Par.
	20	30 +	Neg.	30	Neg.	Imp.
7	40 +	40 +	+ +	+ +	55555000	T.-par.
	40 +	70 +	40	120	5555543210	Imp.
8	40 +	20	18	+	55555000	Par.
	Sl. +	8	22	110	55443210	Imp.
9	40 +	40	60	+ +	55555000	T.-par.
	40 +	40 +	− ve.	80	55432100	Not imp.
10	40 +	40 +	+	+ +	55555000	T.-par.
	40 +	40 +	+	+ +	554432100	Imp.
11	40 +	200 +	100	200	5555542100	Par.
	40 +	N.d.	N.d.	N.d.	N.d.	Died.
12	40 +	Neg.	6	100	00232000	Tabes.
	40 +	Neg.	+	+	00232000	Died.
13	40 +	50	85	180	5554321000	Par.
	40 +	40 +	20	100	555432100	Imp.
14	40	20	+ +	80	5555543210	Par.
	40	8 +	Neg.	80	5555555432	Not imp.
15	40	40	4	90	44321000	T.-par.
	40	20	Neg.	75	554433210	Imp.
16	40	Neg.	0	30	Neg.	Tabes.
	40	Neg.	Neg.	Neg.	Neg.	Imp.
17	40	40 +	+ +	+ +	5543210	T.-par.
	40	40	+ +	+ +	555443210	Not imp.
18	40	40 +	80	10	55555543210	Par.
	40	20	8	50	5555554210	Imp.
19	40 +	40 +	+ +	N.d.	N.d.	Par.
	40 +	20 +	15	50	5555543210	Imp.
20	40 +	40 +	80	100	55555543210	Par.
	40	40	14	100	5555543210	Not imp.

Sl. = Slightly. N.d. = Not determined. Comp. pptn. = Complete precipitation. Par = Paresis. T.-par = Tabo-paresis. Imp. = Improved.

The injections were repeated in the following cases. The blood and C.S.F. were taken immediately before and after the course.

Case	Blood.	C.S.F.	Cells.	Protein.	Large.	Clinically
1	40	8	Neg.	50 %	5554432100	Par.
	40	8	Neg.	45	0011100000	Imp.
2	20	4	Few.	Slight.	5400000000	Par.
	20	Neg.	Few.	Slight.	5432100000	Imp.
2*	20	Neg.	(*a*)	(*a*)	(*a*)	Par.
	Neg.	Neg.	Neg.	60	2100000000	Imp.
4	Neg.	8	Neg.	90	5544321000	Tabes.
	Neg.	8	Neg.	90	4433210000	Imp.
6	Neg.	8	Neg.	35	Neg.	Par.
	Neg.	8	(*b*)	(*b*)	(*b*)	Imp.
8	Neg.	4	20	60	3330000000	Par.
	8	Neg.	10	80	3210000000	Imp.
10	40	40	Ex.	Ex.	5554430000	T.-par.
	40	40	28	80	5555443000	Imp.
13	40	20	15	50	5554321000	Par.
	40	8	8	50	4444444321	Imp.
15	40	20	Neg.	45	5544321000	T.-par.
	40	(*c*)	(*c*)	(*c*)	(*c*)	Imp.

* Third course. Ex., excess.

(*a*) Contaminated with blood. (*b*) Contained some blood. (*c*) Positive; specimen contaminated.

Note.—The cerebro-spinal fluids were put up for the Wassermann tests in amounts of 1·0, 0·5, 0·3, and 0·2 c.cm. The amount of protein was estimated by a nephelometric method, 40–80 mgr. % being considered normal.

Details of Cases.

1. Male, 29. *General paralysis.*—Discharged from a mental hospital in May, 1923, having recovered from, and gained insight into, an acute delusional state. In October, 1923, was noticed to have deteriorated mentally, and was also hallucinated for sight and hearing and had a slight seizure. Threatened to strangle his wife and was taken to the infirmary. November, 1923, admitted to the Maudsley Hospital. He was then distinctly fatuous and unable to understand fully why he was admitted to hospital. He was injected with malarial blood and had eight good rigors. By March, 1924, he had improved mentally and physically and was able to employ himself in simple tasks, but was not able to do the work to which he had been used. He displayed a normal interest in his progress and treatment. He was in good physical condition, with slight tremors of lips and tongue. Reflexes all rather brisk. Coördination and sensation unimpaired. Pupils unequal and sluggish to light and consensual reflex. After a course of tryparsamide there was no evident mental change, but the pupils became inactive to light and consensual reflex. He is now in a Pensions Hospital and recently showed no material change.

2. Male, 35. *Tabes.*—Gastric crises for a year, latterly accompanied by great agitation and emotional display. Had received 6 g. of N.A.B. with little effect on serology beyond slight reduction of Wassermann, cells, and Lange curve. On admission nutrition good. Reflexes all present. Pupils unequal and sluggish to light, but brisk to accommodation. Improved during treatment; crises became less severe and less frequent, but patient complained of continual ache in epigastric region. Course of injection was repeated with some benefit. He has been at work for six months and feels perfectly well.

3. Male, 35. *General paralysis.*—During 1920–23 had several courses of salvarsan. In September, 1923, became depressed and very constipated, and developed numerous hypochondriacal ideas. On admission nutrition fair; tremors of tongue and lips. Reflexes all brisk. Coördination and sensation normal. Pupils contracted, equal, inactive to light and consensual reflex, very sluggish to accommodation. Facial expression that of melancholia with typical wrinkling. Mental state also that of melancholia. After treatment the pupils were unaffected, but later the depression and the constipation cleared up and the patient has now resumed his normal activities.

4. Male, 32. *General paralysis.*—Was taken up by police wandering in street and expressing numerous delusions, certified and discharged after nine months with apparently complete mental remission. Referred to the Maudsley Hospital for a course of tryparsamide. On admission in good health, slight lingual tremors, tendon and cutaneous reflexes all brisk. Pupils unequal, and inactive to light and consensual reflex; right pupil sluggish to accommodation, left inactive. After course of injections physical signs unchanged and mental condition remained normal. Has been at work since distributing papers by motor van for several months and has remained well up to present. He is receiving a third course of injections as an out-patient.

5. Male, 41. *General paralysis.*—Sudden onset with excitement and delusions. Was in mental hospital for six months and was discharged with incomplete remission. On admission to Maudsley Hospital, a little euphoric, and lacking complete insight into his condition. Memory defective for recent events. Nutrition fair. Tongue and lip tremulous. Speech slurred. Tendon and cutaneous reflexes brisk. Coördination a little impaired. Pupils unequal, irregular, and sluggish to light. During treatment put on weight, but deteriorated mentally and physically and became dull and fatuous. Relapsed after being sent home and had to be taken to infirmary. He is now at home but his intellect is definitely impaired. The C.S.F. gave a negative Wassermann after a second course of injections.

6. Male, 39. *Tabo-paresis.*—Has felt "nervous" since 1919; for at least two years there has been steady deterioration and very evident loss of business acumen. On admission he was euphoric, very childish, fatuous, poorly orientated, and amnesic. Nutrition good. Marked labial, lingual, and digital tremors. Speech slurred. Knee- and ankle-jerks absent. Rombergism +. Pupils unequal, irregular, and inactive to light and consensual reflex. Deterioration continued and he was removed to an infirmary.

7. Male, 58. *Tabes.* — Christmas, 1923, complained of backache and in the course of a week or so lost use of legs. On admission very emaciated. All tendon jerks absent; arms and legs very ataxic. Pupils equal and active to light and accommodation. Deteriorated mentally and physically, and became steadily more helpless. Post mortem showed advanced arteriosclerosis; typical degeneration in dorsal columns of cord. Brain not obviously affected, but microscopical examination showed perivascular infiltration of small cells and a certain degree of neurotic degeneration. The C.S.F. in this case was negative both before and after treatment but gave a luetic Lange reaction. He also had a carcinoma of the lower end of the œsophagus, without secondary deposits.

8. Male, 54. *General paralysis.*—Few months ago became depressed, worried, restless, and forgetful. On admission emotional and confused, poorly orientated, and amnesic. Physically in poor condition. Marked lingual and digital tremors. Speech slurred. All reflexes exaggerated. Sensation and coördination normal. Slight paresis right arm; tongue protruded a little to the left. Pupils of medium size, regular and active consensually, and to light and accommodation. During treatment became less confused, but is now distinctly dull and has evidently deteriorated. Physically he has improved, has increased in weight, and the paresis has cleared up. The tremors persist and the pupils react sluggishly.

9. Male, 31. *Tabo-paresis.*—Onset in July, 1923, with attack of confusion. Became acutely excited and was in mental hospital up to May, 1924, during which time he had malarial treatment. He improved enough to be discharged and was admitted to the Maudsley Hospital for a course of tryparsamide. On admission he was in fair condition. There were marked tremors of face, tongue, and fingers. Speech a little slurred. Knee- and ankle-jerks absent. Rombergism slight. Pupils unequal, irregular, and sluggish to light and consensual reflex. Mentally he was exalted and overactive. During treatment he increased greatly in weight and became less tremulous; physical signs otherwise unchanged. Mentally he became dull and distinctly vegetative and had evidently deteriorated. He is living at home and has received a second course as an out-patient.

10. Male, 59. *Tabes.*—Complained of headache and "shakiness" since attack of "influenza" in December, 1923. Also gave history of "washing-basin" sign. On admission no evident mental disturbance. General nutrition good. Slight lingual and digital tremors. Knee- and ankle-jerks absent. Rombergism +. Pupils myotic and inactive to light and consensual reflex. During treatment complained less of headache and felt much better. Physical signs unchanged.

11. Male, 26. *General paralysis.*—In 1920 was discharged from the police for being asleep on duty. Has done occasional work up to August, 1924, when he began to have "fits." Later was taken to infirmary with "status epilepticus." Referred to Maudsley Hospital for opinion as to relation of old G.S.W. head to the "fits." Mentally rather childish and a little overactive, and at the same time very easily irritated and apt to take offence. Speech a little slurred when he became excited. Right knee- and ankle-jerks definitely less brisk than the left. Pupils a little irregular but reacted normally. Optic discs normal. There is a very

slight depression in the right parietal bone. After course of injections became much more stable but is still rather childish.

12. Male, 48. *General paralysis.*—Had syphilis 30 years ago. Indulgence in alcohol and smoking with "high pressure life" for years. Several attacks of giddiness recently which culminated in a mild confusional attack during which he was brought to the hospital. His pulse was then uncountable; there were no other physical signs. Next day he was mentally clear and gave a good account of himself except for the events of the three preceding days. Heart dilated, pulse 150, regular. Electrocardiogram showed 2:1 heart-block with auricle 360, ventricle 180. After course of Nativelle ampoules he developed auricular fibrillation, and on cessation of digitalin injections the heart became slow and regular and has remained normal since (seven months). In view of old infection, blood and C.S.F. tested and found to give positive Wassermann. He presents no physical or mental signs at present, but the serology has not appreciably been affected by a course of tryparsamide.

Summary of Results.

(*a*) *Clinical.*		(*b*) *Serological.*	
Improved	13	Improved	7
Not improved ..	5	Not improved ..	11
Died	2	Not improved, died	2
	20		20

Several cases who showed both clinical and serological improvement at the end of the first course of injections have received second and third courses at intervals of about two months. Their improvement has been maintained, and two (Nos. 1 and 5) now have a negative Wassermann in the C.S.F., although the Lange reaction is still slightly positive. It is to be noted that both clinical and serological improvement may continue for some time after the completion of a course of injections. The condition of the patient at the end of treatment and the reactions of his fluids are not to be accepted as the final result; the drug continues to exert a beneficial effect for some weeks afterwards. It has been noticed that the skin becomes clearer and the general bodily condition improves under the "tonic" action of tryparsamide, which has been remarked upon by American workers. However, as these patients have been under observation for less than a year their ultimate fate remains to be seen. No. 12 is of special interest as his heart condition was quite severe enough to account for his confusion, and he has never shown any neurological signs of paresis in spite of the reactions of his fluids, and of the fact that they were not influenced by tryparsamide. One case of tabes (No. 2), who had had very severe gastric crises for over a year in spite of intensive treatment with mercury and N.A.B., is now, after two courses of tryparsamide, back at work and feels perfectly well although physical signs persist. Dr. Aileen Boyd, working in the laboratory at this hospital, has confirmed the observations of American workers that arsenic may be detected in the C.S.F. for two or three days after an injection of tryparsamide.

As regards the diagnosis of the cases in this series one may recall the words of Head and Fearnsides,[1] who stated:—

"It is quite impossible, in many cases, to diagnose the difference between syphilitic encephalitis and dementia paralytica without observing the effect of treatment and the changes it produces in the Wassermann reaction . . . Numbers of persons suffering with cerebral syphilis are condemned to die untreated because they are thought to be suffering from 'general paralysis,' when in reality they are examples of a curable disease. No complete diagnosis or prognosis can be made until the patient has been observed and treated for at least six months, and the C.S.F. has been systematically examined from time to time."

In no case in this series was there produced any remarkable result such as might not possibly have been obtained by the administration of other arsenic compounds. Several cases of paresis appear to have had their downward course arrested, while others have improved to a lesser extent. Whether tryparsamide is really more potent than other arsenicals is not proved in this series of cases, but the drug is certainly worth further trial. It is easy to administer and does not appear to be toxic in the doses used.

Finally, I wish to record my thanks to Sir Frederick Mott for his help and for the interest he has shown in this investigation; to Dr. Edward Mapother, the medical superintendent, for his permission to publish these cases; and to the staff of the laboratory for the pathological investigations and other help.

[1] Head, H., and Fearnsides, E. G.: Clinical Aspects of Syphilis of the Nervous System, Brain, September, 1914, xxxvii., 1.

THREE CASES OF UNUSUAL FORMS OF LIPOMATA OF THE BREAST.

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IN an organ such as the breast, which consists so largely of fat, which has fat for its supporting tissue filling out all the interstices between the lobes and the lobules, which is embedded in fat, it is no wonder that we frequently meet fatty tumours. These may arise in the fat over the breast, in the fat under the breast, or in the fat inside the capsule of the breast. The last form is the rarest. What it is that determines the growth of a fatty or other simple tumour is unknown, but we imagine that it is something which differs from the stimulus which causes the growth of a malignant tumour. It is therefore always interesting to find both a malignant tumour and an innocent tumour in the same person, and doubly so when they occur in the same organ.

In the first case reported there was a local intramammary lipoma and a scirrhus tumour in the same breast. In the second case there was a large diffuse intramammary lipoma occupying and distending both breasts. In the third there was a fatty tumour in one breast and a scirrhus in the other. The lipoma showed the unusual occurrence of the deposition of calcium salts in the fatty cells.

CASE 1.—L. S., aged 54, was admitted to St. Mary's Hospital on May 5th, 1924, complaining of a lump in the breast.

History.—A lump was first noticed in the left breast about two months ago. About six weeks ago she had a fall and bruised her ribs and back; as a result of the fall the breast was very painful and she applied hot fomentations. No diminution in size has taken place since then.

Condition on Examination.—A lump about the size of a walnut could be felt deeply situated in the upper and outer quadrant of the breast. It was fairly hard and seemed to be attached slightly to the pectoralis major muscle, it was free from the skin, and there was no retraction of the nipple. Small glands could be felt in the axilla. Until Christmas her periods had been regular, since then they had ceased. The left side of the lump seemed distinctly tender. The mass was believed to be innocent.

Operation.—On May 10th a circumferential incision was made round the lower margin of the breast and the breast removed subcutaneously, leaving the nipple. The axillary tail was divided with the cautery. A drain was placed in the wound for 24 hours. She left the hospital with the wound healed in ten days' time.

Pathologist's Report.—The tumour removed from the breast proved to be an encapsuled lipoma about the size of a ping-pong ball, in which the fat was bright yellow in strong contrast to the pale fat in and surrounding the breast. At one side of the fatty tumour, apparently adjacent to or actually in its capsule, is a hard area which on section appears like a rotten pear. This mass, which was the size of an ordinary grape, proved to be a carcinoma spreading actively at the periphery. The breast showed chronic mastitic changes throughout its substance.

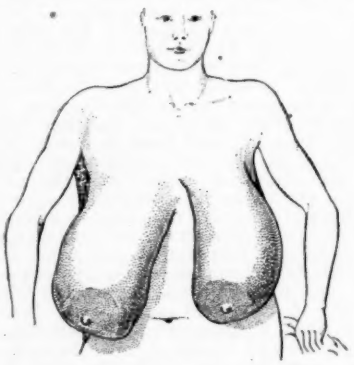
Intramammary lipomata are so rare that even their very existence was denied till lately, and Gross

says, "I am not aware of a single case of circumscribed lipoma occurring in the gland itself," a statement which is concurred in by Bryant in 1887. We know, however, that they do exist both in the localised and in the diffuse form, and this is a very good example of a localised tumour. The fat of which it was composed appeared to have no relation to the fat in the surrounding breast or in the breast capsule, being of a strikingly different colour. Delage reported a case where multiple intramammary lipomata were found, the breast being described as feeling like "a bag of oranges," and later five separate tumours were removed from the breast. In this case, however, a lipoma had been removed from the breast some ten years previously, and I strongly suspect that some small lobules of the original tumour may have been torn off and remained in small loculi of the capsule and developed into five separate tumours later. It is a possibility to be considered.

The lipoma in the above case appeared to be the original tumour and the malignant growth to have followed it. From what we know of the origin of malignant growths from chronic irritation it is only natural that we should suppose that this malignant growth was initiated by the irritation of an abnormal growth in the neighbourhood.

CASE 2.—Mrs. C., aged 41, was sent to see me by Dr. G. A. Finegan on March 28th, 1922, on account of the large size of her breasts.

History.—For two years both breasts have been getting larger, the right more so than the left. She has experienced a dragging sensation and shooting pains in both breasts



during this time. The breasts became larger, more uncomfortable and painful at the periods, and lately this has been more marked, and the pain has changed to a more disagreeable character.

Previous History.—She has had one child, now 12 years old; this she suckled for ten months. Sixteen months later she had a miscarriage at the fourth month; no other pregnancies.

Condition on Examination.—The breasts were both very large and pendulous. (See figure.) One could not quite class them with the huge breasts of parenchymatous hypertrophy, but they were approaching that condition. Over the left breast the veins were the more prominent. Both breasts felt irregularly lumpy, but there was nothing else to be made out. There was no discharge from the nipples which she said had always been of large size. She was put upon a course of tablets of polyglandin.

July 16th, 1923: She was seen again and the breasts were certainly smaller, but still very bulky and pendulous. The right measured 15½ inches and the left 14 inches in circumference at the level of the costo-mammary groove. The nipples were 5 inches across. The veins were still prominent over the left breast. As she was now tired of the continual drag of the breasts and was unlikely to have any more children she expressed a wish to be rid of them. Operation was performed on the 27th and both breasts were removed by flaps. On cutting the breast tissue one was surprised to find that the knife only passed through adipose tissue, no gland substance being visible, and there was a complete absence of the white-looking tissue met with in hypertrophy of the breasts. About 3 lb. of this fatty tissue was removed from each breast. There was no capsule and the fatty tissue permeated the whole gland. The flaps left a sufficiency of breast tissue to fashion shapely breasts and enough skin to cover them, the flaps being planned so that the scar should lie in a circular manner at the lower border of the newly-shaped organs. The operation proved eminently satisfactory, and the patient had a very presentable figure. The nipples were removed, but as they were nearly flat from the stretching of the skin and the immense areolæ were very pale, it was not a noticeable loss. The wounds healed easily.

Pathological Report.—On coronal section the tumours had a circular appearance surrounded by skin, and were 8 by 6 inches across. They had the appearance of ordinary fatty tissue through which coarse greyish strands could be seen running. These strands appeared to the naked eye to be ordinary fibrous trabeculæ. On microscopic section, however, these strands proved to be the compressed remnants of the breast tissue, showing that the fatty tissue had collected in the interlobular and interlobar spaces. There was no capsule to the fatty tissue which was diffused throughout the whole gland, and did not differ either in colour or structure from the ordinary mammary fatty tissue. The condition was evidently a diffuse intramammary lipoma.

Case 2 is a type of the diffuse intramammary lipoma. It is a form of tumour which is excessively difficult to diagnose, as it has no edge or limit, and appears to be hypertrophied breast tissue. It is remarkable in that it was bilateral. In this case, as in Begouin and Haekel's cases, the essential tissue of the breast was split up into small islets lost in the fatty tissue. Whether this condition prevents the breasts from functioning is unknown, as no cases have been reported, but these separated ducts have been known to become distended with a thick milk-like fluid.

CASE 3.—A widow, R. L., aged 70, was admitted to St. Mary's Hospital on June 16th, 1924, with lumps in both breasts.

History.—Patient had known of a soft lump in her left breast for more than eight years. It never gave rise to pain or troubled her in any way, so that she took no notice of it. For the last eight or nine months she had noticed the right breast getting smaller and a lump gradually forming. There were no symptoms till about a month ago, so she took no more notice of it than of the lump in the other breast. During the last month, however, she has had slight pain and there has been a slight discharge.

Condition on Admission.—The left breast contains in its upper and inner quadrant a soft fluctuant mass which is obviously a lipoma. The right breast is atrophic, but there is a tumour the size of a bantam's egg to the inner side of the nipple. The tumour is stony hard, quite fixed to the skin, and to the muscles underneath. The skin is discoloured over the mass, and is ulcerated at one spot. It seems to have incorporated into itself nearly all the breast tissue and the strongly retracted nipple.

Operation.—The lipoma shelled out easily. The bulk of it lay superficially between two lobes of the breast, apparently outside the breast tissue, but there were two lobulations which extended well down between the lobes of the breast, so that it was impossible to say whether it had originated inside or outside the breast capsule. It seemed to me, however, that it would be easier for the tumour to have started inside the breast and have spread to the outside, than to have started outside the breast and to have sent two prolongations into the breast substance through the capsule. The right breast was removed by a radical operation. The lipoma, which measured about 2 by 1 by 1 inches, was an encapsuled mass of bright yellow fatty tissue which presented nothing peculiar to the naked eye. On section, however, numerous areas were seen where calcium salts seemed to have been deposited in the fatty contents of the cells. The carcinoma was of the hard scirrhous type.

In this case the association between the malignant and the benign tumour was probably accidental, the first being in one breast and the second in the other. What is interesting, however, is the deposition of calcium salts in the fatty tumour. Sick reported a fatty tumour from the breast of a woman which contained areas of hyaline cartilage in the lipomatous tissue. In Guy's Hospital museum there is preserved a "large adipose tumour, which measured 23 inches

in circumference, and was removed after death from the breast of a married but sterile old woman, aged 87. When 30 years of age she observed the tumour in the upper part of the right breast, and this she showed to Sir Astley Cooper on Jan. 9th, 1806. She remembered the date, because it was the day on which Lord Nelson was buried. . . . When a section was made it was found to consist of fat, with a piece of bone in the centre." Most of the bone-containing tumours of the breast are either sarcomata or very closely allied to them, but as this tumour had been known for 57 years we may suppose its innocent nature. It is, however, significant that sarcomata have been known to become fatty, and one such tumour was shown before the Royal Society of Medicine, Section of Surgery (vol. xiv., 1921, p. 33). Chipault noted a pendulous lipoma the size of two fists growing from the inner surface of the thigh of a woman of 69, which had been present for 29 years. On section after removal this was found to be a lipoma calcified in parts.

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DIABETES, SURGICAL INFECTIONS AND INSULIN.

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MY object, in the present paper, is to consider one of the many problems related to the use of insulin in the surgical complications of diabetes, basing my observations on a series of 53 such cases [1] in which insulin has been employed.

So high an authority as Dr. E. P. Joslin has expressed on this question the following opinions: "Serious infections occurred with several patients and in these insulin was of no avail" [2]; "It has been recognised that the urine would not become sugar-free in the presence of an infection, even with insulin at liberal doses" [3]; and "*When dealing with infections a rigorous attempt should not be made to get the patient sugar-free either before or after operation.* This is seldom possible and, even if attained, is secured at too great a loss of body tissue." [4]

Despite the authority of Dr. Joslin, whose pupil I am proud to be, and to whom I am indebted for most of my knowledge of diabetes, I have found from the beginning that the above-mentioned views are not sufficiently substantiated by the facts on which they seemed to be based. If Dr. Joslin's somewhat pessimistic conclusions are not correct it might happen that a given patient would be left to die, whose life might be saved by rendering his urine sugar-free or the blood-sugar normal by means of insulin, given in doses large enough and distributed in a sufficient number of injections. It is therefore very important to decide: (1) whether the metabolic derangement induced by infection in some cases is really so profound as to render it impossible to make the blood-sugar normal by means of insulin or whether, on the contrary, insulin in sufficiently large and properly distributed doses might not, in all cases, accomplish that result; and (2), on the assumption that it is possible, whether it is all-important or not to attain absolute sugar freedom in urine or even a quite normal blood-sugar level in cases of surgical infection in diabetic patients.

As to the first point, the actual clinical facts that Dr. Joslin presents in support of his views are the following. In the case of a young man with septicæmia no effect, beneficial or otherwise, was noted with the 77 units which he received during eight days. In a case with erysipelas who, before the infection developed, was kept sugar-free with 12 units, a much larger daily dose was without effect. In a case with cerebro-spinal meningitis insulin was discontinued when the true diagnosis was made, after 30 units of insulin had been given in two injections, and glycosuria persisted to the end. [5] Finally, even 80 units of insulin failed to free the urine of sugar in a diabetic suffering with carbuncle. [6]

In all this there is nothing to show that what was not obtained with 80 units daily, or less, in the cases just mentioned might not have been obtained with higher doses, distributed in a sufficient number of injections. That this is very probable is suggested by a very interesting case recently reported in THE LANCET by R. Owen-Jones, [7] who expresses the same opinion, and also by my own experience in cases such as Nos. 155, 218, 178, and 403, amongst others, of my series.

Clinical Records.

Cases 155 and 218 suffered with necrotic cellulitis of a lower limb, subsequent to infection of slight wounds. When I saw them for the first time both were in a very serious condition. In both the disappearance of glycosuria was obtained, but not before so much as 110 units in five injections, in Case 155 (also in September, 1923), and 176 units in eight injections in Case 218 had been given in 24 hours. Both patients died from septicæmia (pneumococci and tetrageni respectively), and the last specimens of urine passed were sugar-free, the dose in the last period of 24 hours being not less than 200 units in Case 155. Case 178 died from peritonitis after being operated on for perforated gangrenous appendicitis. Before the attack of appendicitis the patient was sugar-free (with insulin); before the operation there was a slight glycosuria; immediately after the operation, which was performed under ether and with adequate insulin preparation, the urine was sugar- and acetone-free; some hours later glycosuria was again present, in a rather intense degree, but with the aid of insulin it decreased again, and before death occurred, about 30 hours after the operation, the urine was sugar-free and remained so to the end. I cannot tell the exact amount of insulin that I injected, but it certainly was well above 80 units in 24 hours.

Despite the facts just mentioned I began to think that Dr. Joslin might be right in the point under consideration when, in Case 281, which I saw for the first time in an extremely grave condition, with acute gangrene of one foot and septicæmia, insulin, in doses of about 30 units every eight hours, continued until the patient's death, 36 hours after amputation, failed to change the apparent intensity of the reaction obtained with the Benedict test. This doubt was strengthened when the same failure recurred in Case 403. This patient had a carbuncle at the back of the neck that had been operated upon two days before without previous insulin treatment, and very severe glycosuria and acidosis subsequently developed. The administration of 180 units of insulin in seven injections, in a period of 21 hours, was unsuccessful. But finally, when 240 units had been administered in nine injections in a period of 31 hours, during which no food was given, the urine became sugar-free and was kept so, except for very faint traces in some individual specimens. To accomplish this permanent result and feed the patient with a comparatively

[1] R. Carrasco-Formiguera: La Insulina en les Complicacions Quirurgiques de la Diabetes, Anals de Ciències Mèdiques (Barcelona), 1924, xviii., July and August.
[2] Joslin, E. P.: Treatment of Diabetes Mellitus, third edit., Philadelphia and New York, 1923, p. 99.
[3] Ibid., p. 636.
[4] Ibid., p. 618.
[5] Ibid., p. 99.
[6] Ibid., p. 619.
[7] Owen-Jones, R.: THE LANCET, 1924, ii., 1119.

liberal diet it was necessary to give about 200 units in eight injections daily for a week when decreasing doses were sufficient. Three months later the wound was healed, the urine was sugar-free without insulin with a diet containing about 80 g. protein, 120 g. fat, and 90 g. carbohydrate.

I think that this case very definitely shows that no pessimistic conclusions as to the possibility of abolishing glycosuria or normalising glycæmia in the presence of severe infection need be drawn from failures in cases in which doses not higher than 80 units in 24 hours were employed, as in Joslin's cases, or even when as much as 120 units in the same period of time were given, as in my Case 281.

As to the second point, it seems to me that Dr. Joslin's negative advice is mainly intended to emphasise the fact that extreme and prolonged underfeeding, carried out in order to render the urine sugar-free in diabetic patients suffering from severe infections, will in most cases be of no avail and may prove disastrous to the strength of the patient and to his powers of fighting the infection. This, however, is not the same thing as the above-mentioned advice as formulated: "When dealing with infections a rigorous attempt should not be made to get the patient sugar-free," since now we have in insulin the best means of fighting efficiently against hyperglycæmia and enabling us at the same time to feed the patient adequately.

My above-mentioned patient (Case 155) was kept with nearly no food for one day, then with no food for the next two, and on the fourth day, when he received only about protein 1 g., and carbohydrate 7 g., with practically no fat, and 30 units of insulin (in the four days he received a total amount of 173 units), he excreted 21·5 g. of nitrogen by the urine, corresponding to a protein destruction of about 140 g. Three days later, with 110 units of insulin, he received protein 9 g., fat 2 g., and carbohydrate 82 g., was sugar-free, and excreted only 8·4 g. of nitrogen, corresponding to a protein destruction of about 59 g. Two days later, with 80 units of insulin, the protein destruction was only about 62 g., as calculated from a nitrogen excretion in the urine of 8·9 g., despite an increase of the diet up to protein 51 g., fat 80 g., and carbohydrate 110 g., although 5·6 g. of dextrose were excreted. In my Case 218 a negative protein balance of −64 g. protein on Jan. 6th, 1924, when he received 17 g. protein, 90 g. fat, 119 g. carbohydrate, and 130 units of insulin (third day of insulin), improved to a balance of −4 g. protein on Jan. 22nd, when the patient received 23 g. protein, 205 g. fat, 61 g. carbohydrate, and 80 units insulin, there being very faint traces of glycosuria; and even further improved to a positive balance of +17 g. protein on Feb. 11th, when the patient received 45 g. protein, 165 g. fat, 80 g. carbohydrate, and 80 units insulin, without glycosuria. My successful case (403) with a carbuncle, in which it proved so difficult to free the urine from sugar, was subsequently kept sugar-free, and liberally fed all through except for the first two or three days of treatment.

It being possible in all diabetic patients, even in the presence of severe infection, to combat the hyperglycæmia without any dangerous underfeeding, the question remains: Is it necessary, in all or in some such cases, to give all this insulin and to take all measures that may be required to render the urine sugar-free or the blood-sugar level normal?

In many instances a certain decrease of the glycosuria or a certain lowering of the blood-sugar level, although not bringing about sugar freedom or normal glycæmia, suffices to change for good the course of events in cases of infection in diabetic patients that were doing very badly. But it would be wrong to conclude that under such circumstances it is never essential that glycosuria be thoroughly abolished or glycæmia be brought to normal. Some such cases do well, either from the beginning or from a given moment, even although no dietetic or other measures are taken to reduce the glycosuria, while this does not actually decrease until the local process has already begun to mend, yet nobody would advise that in all cases no effort need be made to reduce the glycosuria. The truth is that the blood-sugar level at which an infectious process may do well or cicatrisation follow its normal course is different in different cases, depending on circumstances that are, thus far, unknown to us. The possibility exists that in many cases this critical level is just at or about the normal point.

This possibility is well illustrated by Case 332, a woman with no history of diabetes, but with a very large surgical wound of the abdominal wall, which showed no tendency to heal for some weeks. Eventually a necrotic focus appeared in one part of the wound. The urine was tested for sugar and a very faint trace found. When I was called for the first time the Benedict test was negative, but the blood-sugar, three hours after the ingestion of 200 c.cm. of milk, was 0·14 per cent. I did not consider it probable that such a slight departure from the normal could have anything to do with her condition, but nevertheless put her under treatment. Rather to the surgeon's and my own astonishment, from the third day, when the blood-sugar was 0·095 per cent. under circumstances comparable to those of the previous analysis, the wound began to granulate, the necrotic area began to get cleaner, and in a remarkably short period of time the process of healing was completed.

Since the possibility exists that complete sugar freedom and even normal glycæmia may be essential for a satisfactory course of events in a diabetic patient with an infectious process, and since a normal blood-sugar level may be attained in all cases, even in the most severe (unless there is not time enough before the patient dies), with the help of insulin and with no need for undue underfeeding, it is my opinion that, when a given case of this kind is not doing quite well, every effort should be made in order to abolish glycosuria and even to attain a normal blood-sugar level by the means indicated.

The fact must be remembered—and I have found many cases in my experience—that a harmful hyperglycæmia may exist even although no traces of sugar are found in the urine. In cases that are not doing well, even when no sugar is found in the urine, it is therefore necessary to ascertain whether the blood-sugar be normal, and to render it so if it be in excess.

Summary.

From personal experience of cases of surgical infection in diabetic patients and of their treatment by insulin the following conclusions are drawn:—

1. Even in the more severe cases of infection in diabetic patients it is always possible (unless there is not enough time before the patient dies) to attain a normal blood-sugar level if insulin be used in large enough doses properly spaced throughout the day.

2. It may be difficult, or even impossible, to keep the blood-sugar level absolutely normal all the time through, but it may be kept so most of the time and not far from normal the rest of the time.

3. Such a result may be obtained without any dangerous underfeeding, which must be carefully avoided. In fact, with an adequate combination of diet and insulin such patients may be kept sugar-free and at the same time well-nourished, much better than would be possible by any other known measures, dietetic or otherwise.

4. In many cases infection in a diabetic patient may follow a favourable course even when there is a certain degree of glycosuria or hyperglycæmia, but in other instances it may be very different.

5. So long as a given case of infection in a diabetic patient, in which glycosuria or even only hyperglycæmia persists, is not doing well, all efforts must be made to render the urine sugar-free or even to attain a normal blood-sugar level, with the help of insulin and avoiding undue underfeeding.

DIVERTICULUM OF THE PHARYNX.

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DIVERTICULA towards the upper end of the pharyngo-œsophageal tract have been variously described as pharyngeal, œsophageal, and pharyngo-œsophageal. It has been shown by Killian that the pulsion, or pressure, diverticulum is of pharyngeal origin, and consists of a protrusion of the mucous and submucous coats between the circular and oblique fibres of the crico-pharyngeus muscle in the postero-median aspect of the pharynx. Killian also points out that the transverse fibres of this muscle act as a sphincter, in the same way as does that at the cardiac extremity. Cardiospasm causes dilatation of the whole circumference. Œsophagospasm causes bulging at the weakest part of the pharynx, as the cricoid cartilage and the thyroid gland strengthen the anterior and lateral walls.

These diverticula may possibly be of congenital origin, though they have not so far been discovered in infancy or childhood. Some cases are ascribed to injury of the œsophagus; others, again, to stenosis of the first part of the œsophagus, or the cause may be extrinsic, as from pressure by a tumour. They occur mostly in adult males, and symptoms are rare before 40. The sac passes generally to the left, sometimes to the right, of the œsophagus, and may reach the mediastinum.

Clinical Record.

Mrs. E. J., aged 63, admitted to the Wakefield Hospital on April 11th, 1924. For 14 or 15 years she had difficulty in swallowing, but when younger she could overcome this difficulty. The condition gradually grew worse, but not until two years ago did she consult a doctor. It was suspected that she was suffering from a diverticulum of the pharynx, and this was confirmed by X ray examination. The barium meal was seen to fill the pouch and then overflow into the œsophagus. The diverticulum was not palpable. Operation was refused and she left the hospital.

Five months later she was readmitted. She had spent those months in a constant vain endeavour to satisfy the cravings of hunger by filling the pouch with food, when some would probably overflow into the œsophagus. The contents of the sac were then regurgitated, and this process was repeated over and over again. Such articles as peas and currants would remain in the pouch for about a week. The frequent filling up of the pouch with saliva added to her misery and disturbed her sleep. Worn to a shadow (her weight, at one time 15 st., was now about 6 st. 10 lb.), scourged with bed-sores, distraught with a gnawing hunger and a torturing thirst, she was in imminent danger of death from starvation.

Immediate removal of the pouch was out of the question, therefore gastrostomy under local anæsthesia was performed. She continued to eject the contents of the sac for a day or two after the operation. Recovery was rapid, and she was able to be up in a chair in a fortnight. In five weeks it was considered that she was fit to have the diverticulum removed. The various methods of performing the operation were considered—e.g., the two-stage operation, invagination and diverticulopexy. Further X ray examination was carried out, and the sac seemed longer and narrower. The examination was more difficult, as the barium meal was frequently regurgitated before it completely filled the sac.

Operation.—Chloroform was administered, preceded by morphine and hyoscine. Local anæsthesia would have been eminently suitable and perhaps preferable. An incision was made along the anterior border of the left sterno-mastoid. The depressors of the hyoid and the sterno-mastoid were separated; the omohyoid was divided, the trachea and thyroid were retracted inwards, and the sac was at once exposed, lying between the pretracheal and prevertebral layers of the cervical fascia, and passing into the posterior mediastinum. It was not difficult to separate it from those layers of fascia, though at its base one or two fibrous adhesions were divided. Some muscle-fibres were seen to run over the neck of the sac in a vertical direction. Its length was 3½ inches, its width 1 inch. The opening into the œsophagus was wide, and digital examination revealed no stricture. The sac was clamped and divided and sutured, after the manner of Mayo's operation for umbilical hernia. When released from the clamp it disappeared behind the pharynx. It seems, therefore, that if on division it was allowed to escape from the clamp it would be difficult to recover, and dangerous sepsis might ensue. A small tube was inserted, which was removed in 36 hours, and about this time fluid was given by the mouth. Swallowing was difficult and painful at first, but re-education of the mechanism of deglutition was almost complete in a week, about which time she was got out of bed. The wound healed well, no sinus formed, and no bougie was passed at any time. It is important that the proximal end of the diverticulum should be clamped before elevation or manipulation of the sac should disturb its contents, which might otherwise be aspirated into the lung.

If the condition was due to spasm, when did the spasm pass away? Did it disappear when it had formed a pouch, or did it pass away during the five weeks' rest following the gastrostomy, or did the removal of the sac cause it to disappear? One may wonder, too, how a sac without, or with deficient, muscular tissue in its walls can so readily empty itself.

Showing diverticulum of pharynx.

(Radiogram by Dr. J. Alexander Thomson.)

Pathological Report by Dr. P. L. SUTHERLAND, *Pathologist to the Wakefield Hospital.*—"Microscopic examination of sections of the diverticulum shows that it is composed of a layer of epithelium surrounded by loose areolar tissue containing scanty and irregular muscle bundles arranged both longitudinally and circularly. The epithelium, which occupies from one-quarter to one-third of the total thickness of the wall, is formed of from 15 to 20 layers of stratified cells, and is very much folded. The muscle-fibres do not form continuous circular and longitudinal layers, but occur as irregular bundles arranged close to the epithelial lining. Beyond the muscle-fibres there is a layer of loose areolar tissue, containing large numbers of blood-vessels and small clumps of lymphoid tissue. Glands are present, but are very small and scanty. The epithelial lining of the diverticulum is thicker than normal, and the muscular coat is defective, and there is no orderly arrangement of the coats into muscularis mucosæ, areolar tissue, and muscle bundles."

The patient is now in good health, has no difficulty in swallowing, and is gaining in weight.

PS.—Since writing the above I learn that food is occasionally ejected forcibly through the mouth and nose, as if there were some continuance or recurrence of the spasm. Further X ray examination (April, 1925), however, showed no delay in the passage of food, and no narrowing at the site of operation. There is a steady gain in weight.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

SUB-SECTION OF PROCTOLOGY (SECTION OF SURGERY).

X RAY DIAGNOSIS OF COLON DISEASE.

A MEETING of this Sub-section took place on May 13th, Mr. F. SWINFORD EDWARDS, the President, being in the chair, when a discussion took place on the Value of X Rays in the Diagnosis of Diseases of the Colon.

Dr. GILBERT SCOTT, in opening, said this subject was equally important to the surgeon and the radiologist, and he did not think the radiology of the colon had been developed to an equal extent to that of the stomach, perhaps because most surgeons felt that they had not derived full diagnostic value from the method, and hence they ceased to send to the radiologist the material they otherwise might. The value of this diagnostic means could be greatly enhanced if surgeons would (1) supply material to the radiologist, (2) keep the latter informed as to results, especially as to failures, and particularly in private cases. Dr. Scott said he feared that too much was expected of the radiologist; if he overlooked a lesion, or committed a diagnostic error, it was common for the whole examination to be regarded as discredited. The radiologist was working under difficulties, and it must be remembered that patients' interiors varied as much as did their exteriors within normality. At London Hospital every gastric case was given an opaque meal examination, as it was of considerable diagnostic value in such cases, and large series of radiograms enabled the worker in this field to see the error of his ways.

The value of the method depended on (1) correct technique, and (2) correct interpretation. He regarded the opaque enema as of the same value for colon disease as was the meal for stomach cases. In the former, by the time an opaque meal reached the lower part of the gut it was so broken up and haustration was so marked that at the end of the tedious examination one was left in doubt whether or not an organic lesion was present. Hence, for colon cases, or cases in which the colon was suspected to be diseased, he had for some time discarded the barium meal for the opaque enema. He would, therefore, in this discussion, deal with that method by which the whole of the large gut could be visualised. The gut could be manipulated under the screen, and an expert could complete the examination in half an hour without discomfort to the patient. He emphasised the importance of a careful preparation of the patient, as fæces in the colon might lead to errors in diagnosis.

If the technique was correct, the most difficult part remained—namely, the correct interpretation of what was visualised. There were two kinds of error of interpretation: (1) passing a lesion undetected, (2) diagnosing by the rays a lesion which was not found at operation, the second being far the more common. Fæces in the colon, air-locks, pressure from without, spasms, or a partially filled gut might all be reported as organic lesions. The most difficult cases were those with small and atypical lesions. It was almost impossible by this means to differentiate between tubercle and new growth.

Dr. Scott narrated and illustrated a series of examples to elucidate his subject, remarking that at the Mayo Clinic the lesion diagnosed by the rays was found at operation in 91 per cent. of the cases, the lesion not having been demonstrated in the remaining 9 per cent. He thought a serious effort should be made to bring this country abreast of other countries in the matter of a thorough study of the normal appearances; at present there was too great a tendency to regard any deviation from what was considered normal as necessarily pathological. There was also, with us, a distinct lack of collaboration between the surgeon and the radiologist.

Mr. HAMILTON DRUMMOND said his interest in this method of diagnosis was of some duration, but his earlier optimism had been mellowed by subsequent experience, though he still regarded radiology as an important means of diagnosis. Pitfalls were numerous, and considerable experience was needed before being able to estimate the value of the rays in this regard. The only way to palpate the colon was to use both the fingers and the sight, securing a concentration of both faculties. During the last five years he had been his own radiologist for his colon cases. He felt that if the surgeon was to have the full benefit of radiology he should furnish to his X ray colleague a full history of the case, or, preferably, meet him in consultation over the patient. Sometimes patients were sent to the X ray department before a thorough clinical examination had been made; this latter should include the use of the sigmoidoscope. The question might be asked whether one was justified in basing a diagnosis of malignant disease of the colon on the results of X ray examination alone, and he would answer that X ray examination of the colon by barium meal or opaque enema was seldom a prime factor in diagnosis; symptoms and history furnished information of the greatest diagnostic value, though X rays might assist in determining the site of the disease. He had seen patients with growth in the hepatic flexure, with considerable stenosis, in whom a barium meal passed through the colon beyond the growth without delay. There might be a similar happening in the case of a tight stricture of the ileum. X rays were of great value in the diagnosis of such conditions as a pelvic cæcum, a V-shaped transverse colon, and various kinks in the lower ileum and pelvic colon.

Dr. BERTRAM SHIRES said that for many years he had carried out the two methods of examination in colon cases, and in the majority the enema was of the greater value. Unless, however, the radiologist and surgeon worked hand in hand there were many traps which they were liable to fall into. In 30 per cent. of cases in which the barium enema was given there was a filling defect in the pelvic colon in the early stages. In one case in which there was a filling defect in the pelvic colon a study of the clinical aspect and the skiagram led to the diagnosis of carcinoma being made, but abdominal section revealed nothing more than a slight spasm at the lower end of the descending colon. One case appeared to be diverticulitis, but at the operation it was found to be generalised tuberculosis of the abdomen, with a mass in the pelvic colon.

Dr. ARTHUR F. HURST said the chief interest of the subject consisted in how far X rays helped in the early diagnosis of organic disease of the colon, and this interest would be stimulated by a comparison of different methods of examination. Recently he had had the benefit of team work. Chemical examination for occult blood after the patient had been carefully prepared by a hæmoglobin-free diet he had found to be of the greatest value of all, as he and his colleagues had never had a case of growth of the colon in which occult blood was absent. For conditions in the last 10 inches of bowel the sigmoidoscope was of great value, as it gave direct vision, but there were cases in which one was in doubt, and in these barium was a help. He considered that if there was a clinical history pointing to the possible presence of a growth, with constant occult blood, operation should be done, in spite of a negative X ray result. He showed skiagrams of a number of instructive cases.

Dr. ULYSSES WILLIAMS agreed that the barium meal was practically useless to show the position of disease in the colon, but an opaque enema was very useful. For revealing the appendix the meal should be made with buttermilk. He thought the operation of colopexy should be allowed to fall into oblivion. It did not matter where the colon was, as its position had no influence on the question of obstruction.

With regard to the normal position of the hepatic flexure, most books said it was at the tip of the eleventh costal cartilage, but in over 75 per cent. of normal healthy people he had found it to be, with the persons standing up, just at the crest of the ilium.

Mr. J. P. LOCKHART-MUMMERY spoke of the great improvement which had taken place in the diagnosis of colon disease in the last 12 years. An important question was as to how carcinoma of the colon was to be diagnosed when there was neither a palpable tumour nor obstruction; this was now accomplished in many cases in which neither of those helps was present. If diagnosed early, there were no more satisfactory operations for carcinoma than on those growths in the colon. He placed a higher value on the sigmoidoscope than did Dr. Hurst; if a patient had been properly prepared, his experience was that in the majority of cancer cases blood, or traces of it, could be found high up in the sigmoid, if there was no such condition as ulcerative colitis. He attached considerable importance to the history. X rays were a distinct help in the localisation of the growth, and he thought there would be increased accuracy in this in the future. Negative X ray evidence was useless. It was very important to repeat the opaque enema, to lessen the chance of error. By this means also diverticulitis could be either confirmed or excluded, a very important advance in the diagnosis of colon conditions.

Dr. W. H. COLDWELL considered that there was still much to be said in favour of the barium meal as a diagnostic aid in conjunction with the opaque enema in colon conditions, though the enema was the more valuable. He had a word to say about the inefficiency of some wash-outs before making an X ray examination, and the errors which the shadow of fæces left behind might give rise to. For detecting diverticulitis, of which he threw some skiagrams on the screen, he thought the opaque meal was as useful as the enema, and most patients preferred the meal, owing to its greater convenience.

Dr. S. C. SHANKS, speaking of the barium enema method, pointed out that there were certain "silent areas." The first was in the sigmoid. One loop of the sigmoid might be superimposed on another loop, and in that way the symptoms might be obscured. Another silent area was in the splenic flexure. And in the middle of the transverse colon there was often an area which an enema did not fill; it was the highest part, and the enema fell to the more dependent portions. Thus the part which looped over the ridge formed by the spinal column was not filled. He had seen such cases in which the skiagraphic picture resembled that of carcinoma. The barium-meal method was very valuable for investigating cases of chronic constipation; a large mass in the rectum settled the question. In 196 examinations he had made by barium enemata, he found 14 definite cases of diverticulitis (or 7 per cent.) and five doubtful ones. On separating hospital from private cases he found that in the former out of 150 examinations there were three cases of diverticulitis, or 2 per cent., while in 46 examinations of private patients there were 11 of diverticulitis, 24 per cent. That seemed to show that well-to-do people were more prone than others to this condition.

Mr. ASLETT BALDWIN related a case in which a man said he felt some inconvenience in the left side of the abdomen, and had some trouble with defæcation. Examination with the sigmoidoscope did not disclose blood or mucus, and the X ray report was that there was no filling defect nor obstruction. The man was put upon paraffin, with hopes for the best. Six weeks later he said he felt certain there was something abnormal present. Mr. Baldwin thought he could feel a lump, and some distension of the large intestine. He operated, and found a carcinoma in that situation. Another case he described was that of a man who had constipation for a week and had been treated with enemas. When seen, he complained of pain in the upper part of the abdomen on the left side, which was tender. A large mass could be felt on the right side of the abdomen. Washing out was done for a week, bringing away large flakes of lymph and mucus, and the sigmoidoscope showed streaks of blood. X ray examination showed the large intestine and transverse colon down in the pelvis, forming a very acute kink on the left side, and another on the right. There was no sign of any filling defect. The man was told to continue with paraffin, and though that was 14 years ago there was nothing further to report.

LONDON ASSOCIATION OF THE MEDICAL WOMEN'S FEDERATION.

A MEETING of this Association was held on May 8th, at the London School of Medicine for Women, to entertain the council members of the Medical Women's Federation. Demonstrations were given by various members of the staff of the School. In the physiology department Prof. Winifred Cullis demonstrated on the isolated mammalian heart, the action of certain drugs, and the production of arrhythmia by section of the A.-V. bundle. Miss M. Bond, M.Sc., communicated the results of her feeding experiments as to the content of vitamin A in bacon-fat, experiments undertaken in view of the fact that this fat is largely used in the dietary of children. Miss D. Woodman, M.Sc., showed slides, indicating that the feeding of rats with parathyroid exerts an inhibitory action on the thyroid. Mrs. Pillman Williams, M.B., demonstrated the methods of blood-group determinations. Microscopic preparations of fœtal tissues, demonstrated by Prof. M. F. Lucas Keene and Miss E. E. Hewer, D.Sc., were set out. These illustrated some of the points that have emerged in the course of their investigations regarding the correlation between the structural changes in the organs of the fœtus with physiological activity. Miss M. Waller, B.Sc., demonstrated emotive response to stimulation.

A demonstration was given by the National Institute of Industrial Psychology on various applications of psychological tests. Examples were shown of the best known varieties of both linguistic and performance—i.e., non-linguistic—intelligence tests. Some of the tests which are being used for vocational guidance and selection were also demonstrated. Specimens were shown of tests for the selection of engineers, weavers, clerks, and packers, all of which tests had been devised by the Institute at the request of various industrial firms. Some examples were on view of general tests for "manual dexterity" and "mechanical ability" which are being used in connexion with research into the best methods of vocational guidance.

The meeting was largely attended, over 150 members being present.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.

A MEETING of this Society was held on May 7th, Dr. E. F. MAYNARD, the President, being in the chair, when Mr. M. FITZMAURICE-KELLY read a paper on

Some Abdominal Emergencies in Children.

He remarked that the mortality associated with these conditions was to a great degree preventable, and that improvement in results was to be looked for mainly in the direction of earlier diagnosis and treatment. Dealing first with appendicitis, attention was called to the fact that, early in the attack, pain was often not localised, but was complained of across the abdomen. The importance of a band of hyperæsthesia above Poupart's ligament, as evidence that perforation had not yet taken place, and the information to be derived from rectal examination, were especially emphasised. Treatment consisted in

immediate operation, delay being dangerous in young children. The right paramedian incision with internal displacement of the rectus was preferred in most cases; in those with definite localisation to the right iliac fossa, Mr. Fitzmaurice-Kelly preferred Battle's incision, closing it again with drainage of the rectus sheath and providing stab-drainage elsewhere if necessary. In the matter of drainage the surgeon was guided chiefly by his judgment in the individual case as to whether the peritoneum was capable of dealing with the exudate, but as a general rule drainage was more frequently required in diffuse peritonitis in children than in adults. In post-operative ileus the value of pituitary extract and eserine, in combination, was mentioned—in the worst cases jejunostomy was the only hope and should not be unduly delayed. Acute inflammation of Meckel's diverticulum was briefly mentioned, and the value of a paramedian incision in dealing with it pointed out. Pneumococcal peritonitis was not very rare among young girls of the poorer class. Many cases were mistaken for appendicitis; suggestive symptoms were the onset with symptoms of pelvic irritation—loose stools, painful and frequent micturition—and in acute cases severe toxæmia, with disproportionate increase of the respiration-rate. The acute cases did best with drainage, and the value of blood transfusion, as recommended by Fraser and McCartney, was mentioned. Referring to intussusception, Mr. Fitzmaurice-Kelly laid stress on the extreme gravity of the condition and the serious mortality—about 30 per cent.—associated with it. This was almost entirely due to a failure to recognise the urgency of the case at the outset. The clinical picture was very definite and strikingly uniform, and it was a serious error to delay treatment because a tumour could not be felt, or no blood was passed when the symptoms were otherwise suggestive. Three recent fatal cases were detailed, illustrating the sources and the dangers of delay. Pyloric stenosis in infants was, in the light of recent improvements in technique, claimed as a surgical emergency. The early diagnosis, and especially the differentiation of stenosis from pylorospasm, was discussed and Rammstedt's operation was described. In view of the fact that the mortality of cases operated on by this method was of the order of 30 per cent. against 80 per cent. in those treated medically, Mr. Fitzmaurice-Kelly contended that surgery should be invoked at the earliest possible moment after the diagnosis was definitely established.

Discussion and Reply.

The PRESIDENT recalled the days when appendicitis was a battle-ground between the physician and the surgeon. While conceding that the results were now better, he did not think that, as a result of surgical experience, we had advanced in certainty of diagnosis. He agreed that in pyloric stenosis in infants operation should be the rule.

Mr. L. A. PARRY recalled a case of intussusception in which pain had been absent throughout and the symptoms were otherwise obscure. He did not find cutaneous hyperæsthesia of much value in practice, and regarded the physical signs of rigidity and tenderness on pressure as of more value than symptoms. He called attention to the difficulty of diagnosis between appendicitis and certain cases of ileo-cæcal tuberculosis, and was strongly in favour of immediate operation in appendicitis in children.

Mr. H. NETHERSOLE FLETCHER called attention to the virulence of cases of appendicitis starting with diarrhœa. In the matter of drainage he thought no risk should be taken, and that in cases of doubt a tube should be left in. He discussed the diagnosis of intussusception from gastro-intestinal catarrh with bloody stools in infants, and emphasised particularly the intermittency of the symptoms in the former.

Dr. H. M. GALT stated in regard to blood transfusion that, in such cases as he had tested, he had always found the blood of a parent and child compatible—but he recommended that the bloods should be tested in every case.

Mr. J. R. GRIFFITH advocated a transverse incision outside the linea semilunaris, splitting the rectum sheath if more room were required, in cases of acute appendicitis. He mentioned a case of intestinal obstruction by a band following operation by the paramedian incision.

Mr. FITZMAURICE-KELLY, in reply, agreed that the diagnosis of appendicitis had not grown more exact, but contended that, in the presence of acute symptoms, an early exploration was the safest course, and the attempt to arrive at certitude might lead to a fatal delay. The same argument applied, with even greater force, to the case of intussusception, and he had never seen any harm come of a negative exploration.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

A MEETING of this Society was held on May 6th. Sir DAVID WALLACE, the President, being in the chair.

A communication was read by Dr. J. STEWART FOWLER on

Erythrœdema.

Erythrœdema, he said, also known as the pink disease and in America as acrodynia, was a rare affection of infancy and early childhood. He had seen only four cases, but doubtless as the condition became better known it would be found more frequently. The symptoms were disconnected and cases might well be overlooked. The disease appeared to be more common in Australia and was originally described and named by Swift in 1911; later Jeffreys Wood, of Melbourne, published a further series of cases. Following on this the disease was described in America by Bilderback and Weston, who called it acrodynia, and shortly after Byfield reported it under the title of "a polyneuritic syndrome resembling pellagra acrodynia in very young children." In 1922 a few cases were recorded in England by Thursfield, Parkes Weber, and Patterson, while Feer, of Zurich, unaware that the disease had already been described, gave what is the most plausible explanation of the pathology when he named it "a peculiar neurosis of the vegetative nervous system in very young children." He also demonstrated the high blood pressure in the disease.

Dr. Fowler gave a description of four cases. All of these had been perfectly healthy up to the time of the onset of the disease and no hint to throw any light on the cause could be obtained.

The first case was of a girl, aged 2, who suddenly had an attack of feverishness with vomiting. Subsequently she had become cross and sleepless and had developed an itchy rash all over the body; the fingers and toes had become thickened, red and clammy. She was wasted, could not walk, and fell forward on her face when sitting in bed. On admission the child, who was very unhappy, was moderately nourished; the cheeks and nose were bright red. She lay with her face buried in a pillow and over her body were scattered patches of punctate erythema resembling a sweat rash. The hands and feet were swollen and livid red with thickened fingers and toes covered with sodden desquamated skin with a clammy feeling. They did not pit on pressure and the discoloration reached to an ill-defined margin just above the wrist. There was a leucocytosis of 12,000. An interesting point was great muscular hypotonia without any paralysis, the knee-jerks were diminished and sensibility to pin-pricks impaired, sleeplessness was a very prominent symptom, the appetite was poor and the child wasted; there was a good deal of cutaneous irritation, especially of the scalp, with the consequence that lumps of hair were pulled out. The temperature was not raised, but the pulse was always rapid, running from 120 to 150; the blood pressure was from 100 to 120. Soon after admission some teeth dropped out without previous change in the gums, but followed by a persistent stomatitis. After eight weeks in hospital she developed first an infection of a finger-nail and later a fatal general septicæmia.

The second case, similar to the first, occurred in a boy, aged 2, who was sent into hospital by his doctor on account of stomatitis and loss of teeth. The patient was markedly irritable, but sleeplessness was not a prominent symptom. The hands and feet were the same as in the last case, as also was the irritable skin rash with consequent loss of hair. The patient died a few hours after admission.

The third case was in a female infant of 1 year. The condition had been preceded by constipation and diarrhœa six weeks earlier. The same symptoms were present in this case as in the first, but were less severe in degree. The patient improved under treatment but was taken from hospital after five weeks by her parents, who were leaving the town.

The fourth case, in a boy of 13 months, was much more rapid than the previous cases. Three months before he came under medical care he had developed bright red rashes over the body and had become limp, but was not fretful, his nose and cheeks were red and his hands and feet red and swollen. His mother was in no way alarmed. Suddenly a rise of temperature ensued and death occurred in two days. The patient presented all the appearances of erythrœdema.

Summarising the condition, Dr. Fowler said that the age of those affected was usually from 9 months to 2 years, both sexes being equally liable. The disease usually lasted a year and did not tend to be fatal. Symptoms, in their order of diagnostic importance, were as follows: The hands and feet up to the wrists and ankles were first cold, dusky red, and swollen, later the skin desquamated and secondary septic infection was liable to occur. Profuse sweating was invariable with associated rashes of an itchy nature causing the child to scratch and pull its hair. The patients were thoroughly miserable; this was evidently part of the condition and not due entirely to the insomnia which was always present. The physiognomy was characteristic, the red nose and cheeks and the mouth gaping slightly from muscular atony. Loss of teeth was common and consequent persistent ulceration of the gums. Muscular atony was the chief nervous symptom and often was the first thing that drew the parent's attention to the disease. The rapid pulse without pyrexia and the high blood pressure were probably constant features. Anorexia and salivation were features of the condition and there might be albuminuria and pyuria. Nothing definite was known as to the cause or nature of the disease. A distant resemblance to pellagra had suggested a deficiency disease, but this, the speaker held, seemed unlikely. The evidence of its being an infective polyneuritis was faulty. Another suggestion was that it might be some upset of the vegetative nervous system, and many of the symptoms might be accounted for on this hypothesis.

Treatment was not satisfactory and should be directed to maintaining the nutrition in spite of the anorexia to prevent secondary infection, especially of the mouth, and to allay the itching by dusting powders. In one case large doses of atropine were given by Feer with benefit and calcium lactate in another.

Discussion.

Dr. JOHN THOMSON quoted two cases of the condition which were remarkable in that they both were seen within ten days and came from the same small town.

Dr. CRANSTON LOW suggested that the primary condition might lie in septic absorption from the teeth. He thought that the condition of the hands and feet might be considered as exaggerated chilblains.

Dr. FOWLER, in reply, said his four cases came from different places. He thought there might be a possible relationship to chilblains in the condition of the extremities, but he did not think the condition of the teeth primary as in his cases the condition was well established before the teeth became loose.

Dr. CHARLES MCNEIL read a communication on

Fibrosis of the Bronchi and Lungs in Childhood Following Broncho-Pneumonia.

When fibrosis had become established, he said, cough was a definite feature. In his cases cough was very troublesome in the morning on waking, lasting from half to one hour and leaving the child with little appetite for breakfast. Coughing also might occur during the night, waking the child. Cough also occurred on exertion, and vomiting frequently followed a paroxysm. Expectoration was not copious nor fœtid and in no case contained tubercle bacilli. Apart from the paroxysms, there was a clearing of the throat, but this was not characteristic. Breathing was easy with occasional wheezing. The fibrosis was unilateral and usually left-sided with flattening on the affected side and loss of expansion. Dullness was found on percussion, but if extreme suggested pleural thickening or effusion, on auscultation the breathing was bronchial and might be faint or loud, it might become low-pitched, and always did so if bronchial dilatation occurred. Adventitious sounds were the rule and varied with the cough. Radiograms confirmed the physical findings with a uniform shadow on the affected side. Displacement of the heart could readily be seen. Bronchiectasis occurred in some cases, giving characteristic signs. Displacement of the heart was a cardinal sign in unilateral cases. The diaphragm also was pulled up with corresponding alteration of abdominal viscera. The standard of general health in the speaker's cases had been good; though exacerbations of cough had interfered with nutrition in some patients they had been rather prone to extension of pulmonary catarrh. Infectious diseases of childhood were borne well by the children. With regard to tuberculosis, Dr. McNeil said that in older descriptions confusion existed between fibrosis and fibroid tubercle, but after the discovery of the bacillus this had no longer troubled observers. He himself did not think that children suffering from fibrosis were any more prone to tuberculous infection than healthy children. Syphilis was excluded as a cause of fibrosis in the cases quoted. Certain cases showed marked symptoms, but without definite physical signs. X rays showed that the lungs were not quite clear, the change being bilateral. The symptoms in these cases were often very severe and the malnutrition marked.

A description of the pathology of the condition was given, emphasis being laid on the site in the lung where the interstitial inflammation began. Advanced fibrosis of the lungs with or without bronchiectasis was compatible not merely with survival to adult life, but even to old age with a fairly active working life. Ordinarily the prognosis was good, but absence of albuminuria and circulatory disturbance were to be looked on as reassuring signs. The disease did not appear to progress or retrogress with advancing age. Treatment was directed towards alleviating the bronchial catarrh and consequent cough, and an attempt was made to resolve the fibrosis. The patient was kept in bed with plenty of fresh air and sunshine, which caused the cough to abate quickly. Iodides and thyroid had been given but without definite results. Other symptoms are treated on appropriate lines. Case notes of six cases of definite unilateral cases and 12 incomplete cases were included, and the communication was illustrated by X rays and coloured photographs of complete lung sections.

Discussion and Reply.

Dr. FOWLER suggested that the condition was largely pleural and quoted a case of his own which originated in a comparatively trifling pleural effusion. The pleura thickened and the characteristic symptoms developed. The X ray appearances could be accounted for in this way.

Dr. W. T. RITCHIE referred to cases seen by him and spoke of the X ray appearance as a means of diagnosis from pulmonary tuberculosis.

Mr. D. GUTHRIE spoke of cases exactly as described being caused by a foreign body. He had been on the look-out for such a case, but did not think it as common as was supposed, nevertheless the X rays should be examined from this point of view.

Dr. G. D. MATHEWSON mentioned an aortic systolic murmur in a case examined by him which he thought due to mechanical action on the root vessels in the neck.

Dr. MCNEIL, in reply, said he thought that though in many cases the change might be pleural, in others the change was undoubtedly in the lung. The X ray showed more than the percussing finger could detect as the change lay deeply at the root of the lung. The diagnosis from tuberculosis was often difficult, especially in slight cases. A cutaneous tuberculin test was often helpful, as also was examination for the

bacillus. He had not detected a foreign body, but it was possible that one might be masked in the denser shadows. In none of his cases had an aortic murmur been heard.

Mr. J. W. STRUTHERS showed a clinical case of

Endothelioma of the Dura Mater.

This case had been shown to the Society two years previously when an attempt had been made to remove the tumour. The attempt had not been successful, but had caused a disappearance of symptoms for a year, after which there was a return of symptoms. The patient was admitted to hospital recently, complaining of pain in the forehead. There was no sign of increased intracranial pressure. The tumour was removed and was peculiar in that, though small, it projected very little from the surface of the dura, but had the property of eating its way into the overlying bone. Prognosis was not good. Although a simple tumour in its original stages, there were considerable difficulties in removal, and it was likely to recur and spread along the base of the skull. Several microscopical preparations were shown.

Dr. HARVEY CUSHING (Boston, Mass.), Sir EDWARD SHARPEY-SCHAFER (Edinburgh), and Sir CHARLES SCOTT SHERRINGTON (Oxford) were elected honorary members of the Society. Prof. HENNING RONNE (Copenhagen) and Sir WILLIAM BOOG LEISHMAN were elected corresponding members.

ABERDEEN MEDICO-CHIRURGICAL SOCIETY.

AT a recent meeting of this Society, with Dr. JAMES CROMBIE, the Vice-President, in the chair, Mr. G. S. DAVIDSON read a paper on three cases of

Neonatal Hæmorrhage,

due to some of the rare causes. The first was an infant who was delivered by forceps and showed two bruises on the head caused by the pelvic outlet; these showed much clot, which was slow to form and adhered poorly to the scar. Circumcision was necessary on the third day after birth, and was followed by alarming hæmorrhage in the form of general oozing, which was finally arrested by the cautery. Recovery was uneventful, and it was considered that the child was a bleeder, though it was not possible to estimate the coagulation-time or the fragility of the clot. The second case was one of an infant who on the day after birth developed marked jaundice and on the next day intractable vomiting, at first curdled milk, and later bright red blood. In spite of treatment by rectal salines and intramuscular injection of serum the child died on the following day, and, post mortem, no possible source of the hæmorrhage could be discovered. Was this another bleeder? The third case was one of a feeble infant who died on the fourth day after birth as a result of hæmorrhage from the bowel. Here an abdominal tumour could be palpated and was diagnosed as an intussusception, but the child was too ill to permit operation. Post mortem, a spherical cyst of 3½ inches in diameter was found lying between the layers of the mesentery in its upper part, with a loop of bowel stretched tightly over it. Microscopic examination of the cyst wall showed it to be composed of a double layer of unstriped muscle lined on the outside by a thin layer of peritoneum, and on the inside by a mucous membrane resembling that of the neighbouring bowel, but somewhat atrophic. No communication was found between the lumen of the bowel and the cyst cavity.

This condition in such a young infant, Mr. Davidson said, was extremely rare. Well over 200 cases of mesenteric cyst had been reported, but of these only a few occurred in infants. He discussed the condition generally, and suggested a new classification:—

1. *False* (usually some history of trauma; walls of fibrous tissue with small round-celled infiltration, and with no epithelial lining).—(*a*) Serous; (*b*) chylous; (*c*) blood; (*d*) purulent; and (*e*) cystic malignant disease.

2. *True* (with an epithelial lining, unless a pressure atrophy has set in and obliterated it).—(*a*) Dermoid; (*b*) hydatid; (*c*) intestinal sequestrations: (1) mesenteric, (2) antimesenteric (Meckel's diverticulum), and (*d*) retroperitoneal sequestrations (usually Wolffian). Any of these true cysts might be complicated by a discharge into them of serum, chyle, blood, or pus.

At the same meeting Dr. EDWARD R. C. WALKER gave a paper on Pædiatric Experiences in America, in which he described the places he had visited and the work which had appealed to him during six months' post-graduate study in the United States.

Reports and Analytical Records.

ÆTHER PURISS, B.D.H.

(THE BRITISH DRUG HOUSES, LTD., CITY-ROAD, N. 1.)

THIS preparation is offered as a new and distinctive quality of absolute ethyl ether. We recently analysed a sample and reported a trace of peroxide, all other possible impurities being absent. A new sample was then sent to us when we found no reaction of peroxide, the preparation being a very pure form of ether. On inquiry it was ascertained that the first sample had been in our hands for six months, and, being overlooked, had received no protection against exposure to light or percolation of air through the cork. The new sample of ether gave no reaction for peroxide: it is an absolutely pure product.

"TABLOID" HEXAMINE AND METHYLENE-BLUE.

(BURROUGHS, WELLCOME AND CO., SNOW HILL BUILDINGS, LONDON, E.C. 1.)

This is a combination of 3 gr. of hexamine with ¼ gr. of methylene-blue. The therapeutic activity of hexamine is enhanced by the addition of methylene-blue, which possesses analgesic as well as antiseptic properties and is equally active in acid or alkaline urine. The combined product should be of value in a variety of biliary and genito-urinary conditions, before and after operations on the kidneys and prostate, in pyelitis, urethritis, and septic urinary conditions. "Tabloid" hexamine and methylene-blue is sugar-coated and the ingredients are, it need not be said, of a high standard of purity and reliability. The drug is issued in bottles of 25 and 100.

LANSOLETTES.

(MESSRS. ROBERTS AND CO., 76, NEW BOND-STREET, W.1.)

The conditions in which a non-irritating laxative is required are very prevalent, while it is notorious that the public abuse their internal economy by experiments in purgation. Liquid paraffin as a therapeutic agent has therefore to recommend it the facts that it is quite efficacious in suitable cases and does no harm by the establishment of an irritating habit. It is not everybody who might be benefited by taking liquid paraffin who finds the remedy agreeable, though there are on the market now brands that are practically tasteless. Messrs. Roberts and Co. have devised a combination of paraffin with agar-agar, and have made up tablets of this material containing 30 per cent. of lansoyl, a liquid paraffin with agar-agar in a chocolate basis. Thus an agreeable method of administering paraffin, especially to children, is provided, for it would take an expert to detect the presence of the lansoyl through the chocolate. The tablets, called lansolettes, are made up in boxes of 12, the adult dose being one or two tablets with or after the principal meals, the dosage for children being suitably reduced.

Reviews and Notices of Books.

LAMARCK-DARWINISM AND DENTAL DISEASE.

By ORAN STARR, D.D.S., L.D.S. London: G. Routledge and Sons. 1925. Pp. 319. 21s.

A LARGE part of this book is taken up with an elaborate study of the general principles of evolution. The author puts forward views which do not accord with much of the usual biological teaching in this country and attempts to show that dental disease cannot be explained except by regarding it as due to an infraction of those biological principles which, in his view, have governed the evolution of species. The prevention of dental disease can only become possible if we return to the function and environment of our primitive ancestors who were relatively free from caries of the teeth and pyorrhœa.

The author is a firm believer in the views of Lamarck that acquired characteristics are transmissible, and his argument completely depends on acceptance of this hypothesis. While he recognises the part played by natural selection, he considers that variations are purposeful and not haphazard. In his view evolution depends on an alteration in function induced by a gradual change in environment and represents an attempt of the organism to adapt itself to its surroundings. A teleological factor is thus implied though not specifically stated. This change in function precedes anatomical variation. Since the variations are transmitted they grow in snowball fashion and lead to the formation of new species. This is no new conception. The Neo-Lamarckian school has many adherents, but we imagine that there are few who would state the problem in terms so precise and emphatic as the author. Even those who believe that acquired tendencies may be inherited, would state their case in a way very different from Lamarck and would be far from accepting the views put forward in the famous "Philosophie Zoologique." Mr. Starr, however, is *plus royaliste que le roi*, and is fully prepared to accept the whole story, giraffe, wading birds, and all. To him "Lamarck-Darwinism" is more than an hypothesis; it is a gospel with infinite applications to the whole of life. In this volume he has used it to explain dental disease. But equally, his preliminary treatise on evolution might be an introduction to, and an explanation of, almost any form of vital activity, whether mental or physical. Indeed, if we mistake not, the author would regard the laws which he has framed as being not only an explanation of evolution, but also a new instrument of thought capable of wide application. Perhaps we have here the first instalment of a new synthetic philosophy. Mr. Starr postulates that the changes in any organism as well as the changes in environment must be gradual. He regards these as conditions so essential that they assume for him the sanctity of inviolable laws. Dental disease is due to infraction of these laws. Man's dental downfall began with the introduction of fire for cooking, for at once this introduced a sudden change in environment. The teeth being deprived of their birthright of vigorous mastication, became degenerate structures increasingly less able to resist disease as time went on. If we wish to recover our dental health we must revert to raw food, preferably of a vegetable character. Since man in his evolution did not pass through a flesh-eating stage, meat should not be eaten. Fish, however, is permissible, for man, like other mammals, passed through a piscine stage in which many fish were predatory and lived on other fish. To eat fish, therefore, is not a violation of natural law, since it is part of our natural dietetic heritage.

There is undoubtedly a germ of truth in the author's contention that there is an evolutionary factor in dental disease, and that the jaws and teeth are suffering from a gradual degeneration consequent on their relative disuse as compared with primitive man. It is conceivable that an alteration in our environment, which imposed a hard, detergent, and non-fermenting food in place of the soft, starchy aliment of the modern Englishman, might, in the course of time, bring back the massive jaws and strong teeth which the primitive savage even to-day possesses. It is an arguable thesis, however, that such a change might hardly be worth while; that the pappy foods of modern cookery are themselves a part of that form of evolution which we call Western civilisation. Not very good for us perhaps, and bringing with it a train of dental disease and abdominal trouble; yet so intimately bound up with the fabric of our lives that it would not be possible to revolutionise our dietetic environment without also interfering with a great many other things which we regard as essential to our comfort. While over-refined bread is open to criticism we confess that the alternative of raw wheat grains as a way of obtaining starch, which Mr. Starr recommends, leaves us without enthusiasm.

Mr. Starr's premises and conclusions are indeed hazardous speculations. Yet the book is well worth reading. We take evolution so much for granted that it is salutary to have a challenge flung at us which compels us to reconsider the nature of the mechanism by which we suppose that man has evolved from the amœba.

HISTORY OF MEDICINE.

Medicine: an Historical Outline. By M. G. SEELIG, M.D., Professor of Clinical Surgery in the Washington University School of Medicine. Baltimore: Williams and Wilkins Company; London: Baillière, Tindall and Cox. 1925. Pp. 287. 11s. 6d.

WE are driven to preface our review with a quotation from Macaulay, which, *mutatis mutandis*, describes our frankly unfavourable impression of this book.

> "Nothing in the work has astonished us so much as the ignorance or carelessness of Mr. Croker with respect to facts and dates. . . . The notes absolutely swarm with mis-statements into which the editor never would have fallen if he had taken the slightest pains to investigate the truth of his assertions."

On p. 7 Prof. Seelig says: "In certain primitive races the so-called 'Mica' operation was done, this consisted in making a permanent urethral fistula in those males not considered worthy of propagating the race." The Mica operation has nothing to do with fitness for propagation, for it is performed on every male at the age of puberty and in no way prevents impregnation, as will be seen upon consultation of W. E. Roth's "Ethnological Studies Among the North-West Central Queensland Aborigines," p. 179. On p. 43 we find "The Arab hordes of the South destroyed the Eastern Empire and appropriated its capital, Constantinople, as their own." The destroyers of the Eastern Empire were Turks. On p. 49 we find a statement to the effect that it was Justinian who persecuted the Nestorians, led by the priest Nestorius, and so led to their seeking safety in Syria and Persia. As a matter of fact, it was the Emperor Zeno who was the cause of their flight first to Edessa and later to Persia, and Nestorius was not a priest but a bishop and patriarch of Constantinople. On p. 57 et seq., concerning Salerno, Prof. Seelig says that "it served both as type and a stimulus to the founding of other universities: Bologna in 1110, Oxford and Montpellier in 1180, Paris in 1205." These dates are not accepted, though we allow that to fix accurately a definite date for the foundations is difficult. Bologna, however, held her octocentenary in 1888; the earliest date at which Oxford can be called a university is 1167. There was a school of medicine at Montpellier in 1137, but the earliest allusion to a university is 1220. Paris became a university somewhere between 1150 and 1170, though there had been a school there in earlier days—a migration of alien scholars from which was probably the origin of Oxford. As to Salerno being the type and stimulus of other universities, nothing is more

remarkable than the fact that despite the position of the Salerno School of Medicine, the university, so called, for it never was a regular university, had no influence whatever in the development of academic institutions. (Hastings Rashdall, "Universities of Europe in the Middle Ages," Vol. I., p. 82.) On p. 60 we find it stated that the Regimen Sanitatis Salernitanum consisted of "thousands of verses in hexameter." The number of lines in the poem varies in different codices, but the longest is 1239, the shortest is 370, and the mean of five versions is 710. On p. 100 Prof. Seelig says, in talking of the sixteenth century: "The spirit of mediævalism soon debased Plato's creed into what is known as Neoplatonism, a hodge-podge of cabalism, astrology, and alchemy." Can he ever have heard of Plotinus or of Porphyry? On p. 109 Harvey's famous dictum is, with a fine disregard for grammar, quoted as *Omnis vivum ex ovo*. On p. 114 the expression "the cups that cheer but not inebriate" is attributed to Dr. Johnson. On p. 131 James Douglas is described as having discovered "the peritoneal pouch behind the rectum." On p. 160 we find "Of all the pure and naked truths uttered by old Hippocrates, none was purer essence of truth than his famous *Populus vult decipi*." There may be some statement somewhere in the Hippocratic corpus having the same meaning, but we doubt it, and anyway Hippocrates did not know Latin. The phrase is generally said to have been coined by Cardinal Carafa (d. 1591), who was Papal Legate in France and who used the words in reference to the Parisians. On p. 185 we find the Edinburgh anatomist, Robert Knox, described as John Knox, and the Burke and Hare scandal as an instance of body-snatching, whereas it was murder.

The book is a reprint of eight lectures delivered in the Washington University School of Medicine, with the wish to "make a stimulating appeal to the mind of the student during his plastic medical school period." It is a pity that the work contains so many inaccuracies, for the idea and aim of the lectures are good, and we must give praise to the author for his quotation of Newman's type of a gentleman as given in the Scope and Nature of University Education, as applied to the physician. Dr. Garrison, whose excellent "History of Medicine" is a great contrast to the book now before us, furnishes a somewhat bittersweet foreword to Prof. Seelig's outline.

Pictor's Tract on the Treatment of the Renal Calculus, 1557. A Facsimile of the Original German Text from a Copy in the Library of Strasbourg University. With an English translation by CHARLES GREENE CUMSTON, M.D., Lecturer on the History of Medicine and Medical Philosophy in the University of Geneva. London: George Routledge and Sons, Ltd. 1925. Pp. 65. 5*s*.

George Pictor, the author of this little tract, was born at Villigen in the Black Forest in 1500. He was for some time a schoolmaster at Freiburg in Breisgau, but later studied medicine at the university of that city, where he also took his degree. The university offered him a professorial chair, which he refused in order to take the post of stipendiary physician at Einsisheim. He wrote various other medical works, a list of which is given by Dr. Cumston. The book now before us is a popular work, "written for everybody's use." It consists of eight chapters, the third of which tells how to differentiate between renal calculus and the colics. Though a good enough description of renal colic is given, but little help is supplied in differential diagnosis. Other chapters deal with prevention and cure. On the whole the advice is good considering the date of writing. As to prevention, Pictor sums up his advice as follows: "In brief, if stone in the kidney is to be avoided, a regular life must be led." The best part of the book is the dedication to "the Honourable and Learned Gallo Blet . . . my respected Master and Patron," in which Pictor reminds his patron of a reward given to a peasant who had offered him some water, by Artaxerxes. "For this act he honoured this peasant as his friend and even raised him to the rank of a nobleman. Should such a mark of esteem be accorded me, your Excellency would incite me to greater diligence in all circumstances. I would also recommend your Excellency to God and pray that He might accord you happiness and pleasure, and that you might be able to fill your office and govern for a long time to come with God's will and in collaboration with the honourable Dean John Wagnere and others." Surely an appeal to melt the heart of a stone!

TUMOURS AND CANCERS.

By HASTINGS GILFORD, F.R.C.S., formerly Hunterian Professor, Royal College of Surgeons of England. London: Selwyn and Blount, Ltd. 1925. Pp. 703. £2 2*s*.

THERE was a time when no pathologist of distinction could be considered to have placed the coping-stone on his life's work till he had formulated a cancer theory. Nowadays, the actual workers in this field are less prone to indulge in these speculations, and the broader consideration of the subject is more commonly undertaken by the onlookers who, after all, may see most of the game. Fortified in the belief that pedestrianism is not an angelic prerogative, Mr. Hastings Gilford having "flapped his wings, cranked his engines, and wound himself up" (p. 622), has proceeded to attack the cancer problem. He has obviously read widely, the list of authors quoted includes some 1600 names, and thought deeply on the subject, and has arrived at definite conclusions. He believes that the investigation of cancer has hitherto been on far too restricted lines. Needless to say, he has little faith in morbid anatomy and histology which he calls necrology (p. 624), and, admittedly, he is not alone in failing to appreciate that subtle distinction between the killed and the dead cell which is yet sufficiently strong to justify the experimental histologist, to himself at any rate, in his life's work. But experimental cancer research also makes little appeal to him. He says:

> "Engrafted neoplasms of mice are not much better than dolls or idols, as compared with living things and ideals. It is true that these neoplasms are alive, but they are in other respects no more than crude images of that which they are supposed to represent. Even the spontaneous neoplasms of mice, though true biological products, differ as widely from our neoplasms as do mice from men, so that no one would put any reliance upon evidence gathered from their study, unless it tallies with that already gathered from clinical experience and from general observations of the neoplasms of men" (p. 624).

In place of these restricted investigations, Mr. Gilford turns to biology, by which he means any science which has any bearing on the study of life. But inasmuch as he points to syphilis, malaria, enteric fever, and tuberculosis as examples of diseases which defied all efforts to understand them until their secret was revealed by methods of biology, pathologists and bacteriologists may yet take heart, encouraged, indeed, by the knowledge that their culture is deeper and broader than even they themselves supposed. Mr. Gilford sees disease as Nature's punishment—"Cancer is Nature's punishment for heinous biological transgressions. Of this we cannot be rid, until we are led through the paths of knowledge, of realisation of sin and of repentance." Looked at in this light, cancer is malignant but not malicious. Just as the scourge of the itch taught men to wash and, by compelling cleanliness, helped in the destruction of typhus, and enteric fever and cholera compelled us to cease drinking sewage (p. 625), so, Mr. Gilford holds, when its secrets are revealed, will cancer, too, make for our health and happiness. This biological conception of men rising on stepping-stones of their dead microbes to higher things is intriguing, but on this basis one might pause to lament the untimely disappearance of typhus fever, for its lesson might be equally valuable.

Put briefly, Mr. Gilford's doctrine is as follows. Cancer is essentially a disorder of development. The development of some cells may be arrested while that of others may be unduly hurried. In either case the cells are roused into regressive activity by stimuli, when they become cancers—and the stimuli are the evils of civilisation, all the old ones which have already been recognised by other authors, and many new ones including beef-tea, alcohol, and oral sepsis. The arguments on which this thesis is based are voluminous. Some of the author's conceptions are of interest, and some, no doubt, are just, but they are so often supported by simple assertions, by bad reasoning, and by debatable pathology that they fail to carry weight. For example, on p. 404, it is stated that dental sepsis hardly existed a century ago. "To attribute this" (oral sepsis) "to neglect of the tooth-brush is a serious slur on the dental profession, for never before has the tooth-brush been used as it is now, and the dentists of 50 years ago were both scarce and inefficient as compared with the dentists of to-day. Yet caries and oral sepsis, hardly recognised as causes of general disease 50 years ago, are to-day recognised as among the most important of all causes." Surely here the author confuses recognition with existence. On p. 162 we are told that alcohol produces fibrous degeneration of the liver and kidneys by bathing all the cells of the organ with diluted poison. Innumerable examples of this kind could be quoted. While we find that Mr. Gilford's book, founded, as it is, on a large range of reading and practical observation, has an interest for the student of malignant disease, we cannot feel that he has done much more than state in a general way the problem which still remains to be solved.

MANUAL OF PSYCHIATRY.

For the Medical Student and General Practitioner. By PAUL E. BOWERS, M.S., M.D., Examiner in Lunacy, State of California; Neuropsychiatrist, Los Angeles General Hospital. London and Philadelphia: W. B. Saunders Company, Ltd. 1925. Pp. 365. 18*s*.

Dr. Bowers has produced a book which is compact and comprehensive, and has laid adequate emphasis on the neurological aspect of the subject. The classification adopted is that outlined by the American Psychiatric Association, which appears to be in the nature of a list of mental disorders rather than a schematic arrangement. The book shows evidence of the practical experience of its author; the chapter on Methods of Examination is thorough and that on Treatment is practical. There are a number of tabulated lists—for instance, of the causes of convulsions and of the differential diagnosis of various conditions, which form a useful feature for the revision of knowledge. A long section is devoted to the criminal implications of insanity, each mental disease being discussed in relation to the particular variety of disordered a-social conduct which may arise. The matter in the book is ingeniously arranged and tabulated. The treatment of the subject is rather superficial, but as a handbook for the student the volume is quite adequate.

LANDSCAPE PAINTING.

By ADRIAN STOKES, R.A. London: Seeley Service and Co. 1925. Pp. 256. 15*s*.

IT is probable that this book, which is an addition to the New Art Library, makes a considerable appeal to medical men, as the interest taken by the profession in landscape painting appears to be widespread and spreading. Last year the modest exhibition held at the Royal Society of Medicine produced 60 medical exhibitors without exhausting the number of those who might well have shown their work; and, plastic work apart, of over 200 exhibits all but four or five fell generally under the head of landscapes.

Mr. Stokes's book is an excellent one. The reasoning is clear, the instruction simple and detailed, and the illustrations, where introduced, have a proper bearing on the text. He addresses himself mainly to workers in oil, but tempera work is fully noticed, and the remarks on water-colour painting are useful. The detailed description of the author's work on the beautiful tempera "Autumn in the Mountains," now in the Tate Gallery, is an informing lesson.

With one suggestion of a really practical teacher it is not easy wholly to agree, and we suggest that more than a rudimentary knowledge of perspective will often be found valuable in landscape painting. It is true that the landscape painter need not render angles and vanishing lines on any building that may come into his composition with the accuracy of an architect, but the knowledge of how to do this must surely give him considerable facility in dealing with the surfaces, elevations, and contours of a large landscape. Turner lectured to the Academy on perspective, and though it is recorded that his teaching was unintelligible, he certainly used his intimate knowledge in his own landscapes, while the valuable work on the subject in the New Art Library is written by an accomplished landscape painter.

Mr. Stokes's volume is calculated to induce medical men to develop any taste for painting that they may possess, and to introduce more of our colleagues to a pursuit for which much of their training must have fitted them, and in which they will find a rare source of pleasure.

The late Sir James Mackenzie's work on "Angina Pectoris" has been translated into French by Dr. E. Guilleaume, of Spa, and published in Paris by the Librairie Félix Alcan at the price of 25 francs.

Dr. Jamieson B. Hurry's "Vicious Circles in Disease" has been translated into Spanish from the third English edition by Dr. Diego Moxó y Queri, with a preface by Dr. Augusto Pi Suñer. The book is published by the Editorial Médica Mariano Roig, Premiá de Mar, Barcelona, Spain.

New Inventions.

A NEW ANÆSTHETIC INHALER.

I HAVE had constructed to my design an anæsthetic inhaler for which I claim the following advantages. It can be used for nitrous oxide, ethyl chloride, chloroform, C_1E_2 mixture, or ether, open or closed; it is simple in construction and economical in use; anæsthetics can be renewed by opening the lid and dropping them on to the pad without removing the inhaler from the patient's face; and when used for closed anæsthesia very little vapour escapes into the atmosphere. In operations requiring a lateral position of the head, one is able to keep well away from the field of operation, and the work of the surgeon is interfered with much less than when using an ordinary mask. The inhaler consists of a metal face-piece, shown in the illustration, with sorbo-rubber face-cushion, between which and a rubber bag of 1½ gallons capacity is a metal cylinder divided into two compartments, one of which is filled with a pad of absorbent material to take the anæsthetic. A sump catches any excess of anæsthetic. At the distal end of the rubber bag is a tap to which an oxygen tube can be attached. By removing the bag the inhaler can be used for open anæsthesia, and by adjusting it, for closed anæsthesia.

The inhaler is made for me by Messrs. Philip Harris and Co., Ltd., Edmund-street, Birmingham.

Wolverhampton. W. R. SOMERSET, M.B., Ch.B. Edin.

THE LANCET.

LONDON: SATURDAY, MAY 23, 1925.

OPHTHALMIC BENEFIT UNDER THE INSURANCE ACT.

IT is said that the number of medical practitioners trained in ophthalmic work is at present insufficient to undertake the treatment of the large numbers of insured patients who are likely to take advantage of the suggested ophthalmic benefit under the Insurance Acts. It is on this ground largely that opticians who already supply glasses in connexion with the so-called "optical benefit" provided by some of the larger approved societies are being proposed to carry on this work. In connexion with this subject, let us in the first place consider the relations of the public services to ophthalmology in the immediate past and at the present time.

1. *Education.*—The school system has been the pioneer agency in this respect and the establishment of school clinics all over the country in the hands of medical practitioners trained in ophthalmic work provides the nucleus of the required service.

2. *The Army.*—One of the most significant features of the medical services during the war was the organisation of an ophthalmic medical service. That it was possible to do this while continuing to provide for the needs of civilians at home is a fact that should be noted. The efficient coöperation of the optician was, of course, essential and will be freely acknowledged.

3. *Pensions Service.*—Following the war came the work of the Ministry of Pensions, and in this the same specialists who served the nation in the army have carried on their work until the main problems have been settled and little remains to be done in the ophthalmic branch of the Pensions Department.

4. *Insurance Service.*—Only a very few of the approved societies have made arrangements by which their members may obtain the advice of ophthalmic surgeons under the Insurance Acts. The term "optical benefit," in insurance regulations, refers to a special benefit which has been established by some of the larger societies by means of which patients who think they need spectacles are helped to obtain the services, not of an ophthalmic surgeon, but of a sight-testing optician. The opticians are moving to get this system extended and perpetuated. On the other hand, we have reason to believe that the Ministry of Health are finding a better way.

We do not deny that, although there are many so-called sight-testing opticians who are not competent to correct any but the simplest cases of refraction, there are others more competent. It is the declared object of their leaders, as expressed week by week in their journal, the *Optician*, to enforce a high standard of competence in this respect and to obtain for those opticians so qualified the hall-mark of State recognition, so that the anticipated general extension of the so-called optical benefit under the Insurance Acts may fall to their lot to administer. Does it not stand to reason that these sight-testing opticians, if they succeed, will establish themselves as a privileged body of practitioners without medical qualification but with the kudos of State recognition, who will tend more and more to monopolise the treatment of diseases of the eye? Such an ambition may be repudiated in the published writings of the opticians concerned, but actions speak louder than words. They have already established a "Refraction Hospital" in London where the use of the ophthalmoscope is taught, and they are taking steps to do the same in other cities. It may be said why, if they make themselves competent to deal with cases where nothing but an error of refraction is concerned without any involvement of the general health, should they not be recognised as such? The answer is twofold. In the first place, we may remark that medical benefit is granted for health insurance and should not be granted for objects in which the health of the insured individual cannot be considered involved. In the second place, defects in the ocular refraction *are* frequently closely connected with the individual's health; we may instance the connexion between astigmatism and headaches in young adults, and the occurrence of premature presbyopia as an early symptom of glaucoma. How often it happens that ocular symptoms afford a clue to local or general disease is made very clear on a perusal of Mr. PERCY FLEMMING'S address in our present issue. But already there are signs that the ambition of the sight-testing optician is to become an ophthalmic consultant. "A fair proportion of sight-testing opticians," says a writer in the *Optician*, "are more skilled in the detection of ocular diseases than the majority of medical practitioners."[1] The argument is, of course, that the optician who discovers a disease with which he knows he is incompetent to deal will refer his patient for more highly skilled advice, but the gap between diagnosis and treatment is, after all, not so great in many cases as between ignorance and diagnosis. It would seem that if the opticians get their way they will in time become a body of privileged non-medical practitioners who will acquire vested interests in the treatment of insured patients. Is this to the public good?

And what is the alternative? It is said that the average general practitioner is not sufficiently often competent to deal with cases of refraction and that the number of competent ophthalmic specialists is so small that it would be impossible for them to deal with all the insured population. With the former statement we may to some extent agree, with the latter we do not. The appointment at many of the greater hospitals of special refraction assistants in addition to the clinical assistants who in the past dealt with a large part of this work; the continually growing number of education authorities who provide for refraction work (in 1920 the number was 280); the growth of ophthalmic private practice in the country—many specialists have consulting-rooms in several centres, so that it is probably true to say that there is no section of the country where a patient would sacrifice more than half-a-day's work in order to have his refraction tested and eyes examined by an ophthalmic surgeon; the number of those who have already answered the appeal recently issued by the British Medical Association and Ophthalmic Benefit Committee,[2] and have professed themselves willing and able to deal with these cases: all these circumstances combine to show that the problem which it is said cannot be solved except by calling in the aid of unqualified practitioners is not insoluble. The question has been raised, however, Are these considerable numbers of ophthalmic surgeons who are

[1] The Optician, March 20th.
[2] THE LANCET, Jan. 3rd, 1925.

volunteering to do the required work at a fee of one guinea for each completed case of refraction competent to do the work? Dr. FREELAND FERGUS, of Glasgow, whose paper on Miners' Nystagmus is given on another page, has lately published a brochure entitled "What is an Eye Specialist?" which is gleefully quoted in the pages of the *Optician*, for Dr. FERGUS throws doubt on the competence of many of those practitioners who claim to be ophthalmic specialists, chiefly on the ground that they have an insufficient knowledge of physical and physiological optics. With much of what he says we are in sympathy. Undoubtedly most qualified men and women need a course of at least two years' post-graduate intensive study before they can acquire the necessary familiarity with the problems with which they will be faced as ophthalmic specialists. At the same time we do not agree that the facility in the employment of mathematical formulæ which is called for in dealing with the more difficult problems of theoretical optics is an essential requirement. The important point is that some means must be found whereby the special competence of the men and women who may volunteer to do this work may be ensured. The idea that anyone possessing a medical qualification should start to learn his ophthalmic work by getting experience at the expense of insured patients is wholly indefensible. He must have had actual practice in hospitals of ophthalmic work and he must be prepared to afford evidence that he has already acquired the requisite skill in this branch of practice before he can be recognised by the State as competent for this special purpose. The proposals of the joint committee already published to ensure this object are a good beginning, and we understand that further machinery is being elaborated by means of which their intentions may be carried out. On the success with which this is done much may depend.

HOMES OF RECOVERY.

THE modern hospital with its special departments, its operating theatres and laboratories, is increasingly expensive to build and to maintain, and, as our diagnostic technique grows, the expense is likely rather to increase than diminish. It is therefore becoming the practice to maintain in the country or by the sea homes of recovery to which patients can be sent when it is no longer necessary for them to continue under treatment in the parent hospital, while they are not yet fit to be sent either to a convalescent home or to their own homes. During the last three or four years the financial position of voluntary hospitals has so greatly improved, their annual receipts and expenses have so nearly balanced, that the question of extension is again becoming practical. Nearly every voluntary hospital committee in the country has reported the need for more accommodation, and in the aggregate some thousands of additional hospital beds are said to be required in England and Wales. That being the case, the right use of the auxiliary hospital becomes a pressing issue. Of the value to parent hospitals of homes of recovery, auxiliary hospitals, country annexes, or whatever we may choose to call them, there has never been any reasonable doubt. What is good for the hospital should be good for the patient, but there is some difference of opinion as to the precise character of the advantage enjoyed by the hospital. At last week's conference of the Incorporated Association of Hospital Officers, reported on another page, there was an interesting discussion on the subject provoked by the paper read by Dr. F. N. KAY MENZIES on the financial aspect of the auxiliary hospital. He was concerned to inquire into the extent to which the auxiliary can relieve the pressure upon the beds and consequently upon the finance of the parent institution; the facts and experiences which he marshalled had forced upon him the conclusions that when a patient has reached a certain stage of recovery his retention in the town hospital is uneconomic, and that substantial savings can be made by drafting him to a recovery branch. Some of Dr. MENZIES's critics, and those not the least authoritative, were inclined, for technical reasons, to be doubtful about the pecuniary savings—they were uneasily conscious of a flaw in his argument, but did not find it easy to put their finger upon it. Evidence was, however, not lacking that substantial economies can be, and are being, made by the extended use of homes of recovery.

It is obvious that strict finance is not the only side of the question. The object of a hospital is to cure its patients as surely and as quickly as possible, both for its own sake and for theirs, and that cure is more rapid in the cleaner air and more reposeful surroundings of the country is the merest truism. If, therefore, an auxiliary hospital failed to make any savings for the parent house, it would still abundantly justify its existence. When, however, it not only sends the patient back into the world some days earlier than would be possible if he remained in the town hospital, but saves sums of money which, in the aggregate, are imposing, there is little room left for argument. It is not every great hospital that can be moved from its central position—the Middlesex Hospital is an apposite case in point—but there is abundant need for more auxiliary hospitals.

What effect the more economic use of parent hospital beds will have on the staff remains a matter for consideration. It is stated by those who know that the medical and nursing staffs of London hospitals are already working nearly up to the breaking-point, and, if the stream of patients is to be more rapid, it will be necessary at all events to augment the staff of nurses. It will not be practicable to employ probationary nurses at an auxiliary hospital unless there is a resident medical officer, for the General Nursing Council would not recognise such employment in the prescribed training. This difficulty might be met by linking the nursing staff of the auxiliary with the parent hospital, probationers passing from one to the other, and, if necessary, by combining the annexes of various hospitals in order to have an auxiliary hospital large enough to require a resident medical officer. These are some of the questions on which more information is needed, but they do not invalidate the argument for providing more auxiliary hospitals. Economy and psychology both point to the importance of multiplying them.

SAFEGUARDING MEDICAL PRACTICE.

DURING the past year the risks to which doctors may be exposed in the work of their calling have been brought prominently before the medical profession through two cases which aroused a great deal of public interest, the Harnett case and the Bateman case, and it is to be hoped that the lesson contained in these two unfortunate occurrences will impress upon a still greater number of medical men the necessity for securing adequate protection for themselves through membership of one or other of the great medical defence societies.

The London and Counties Medical Protection Society held their annual meeting on May 20th at Victory House, Leicester-square, London, when an interesting and instructive report of the Society's work in 1924 was submitted by the council. The solicitors, Messrs. Le Brasseur and Oakley, stated that 1924 might be regarded as one of the heaviest litigious years in the annals of the Society, but of the eight cases which went for trial, excluding smaller county court cases, one cause only was lost. In the case of Harnett *v.* Bond and Adam, involving principles of vital importance to the medical profession generally, the whole of the expenses incurred by Dr. Adam, who was a member of the Society, were borne throughout by the Society. The outcome of this case decided the council to make provision by insurance for an unlimited amount so that a member could be completely indemnified under all circumstances, the limit of indemnity for defraying damages incurred by a member having previously been limited to £3000. (A similar step was also taken by the Medical Defence Union.) Apart from litigation, over 409 cases were dealt with by the Society's solicitors, who point out again how important it is that a member should not, through fear of delay, act on his or her own initiative, but should place the case from the first in the hands of the Society. The report, as usual, records a number of most interesting and instructive illustrations of difficulties encountered and overcome with the help of the Society, and covering all branches of medical life. Space alone prevents us publishing in these columns a larger selection than the following :—

A member had a claim made against him by the father of a child whose ear it was alleged had been damaged by the doctor's violence in quieting the child's struggles during the administration of an anæsthetic. Considerable difference of opinion arose amongst the experts consulted. Negotiations were commenced with a view to a settlement by way of a solatium and this was satisfactorily arranged, all charges against the member being unreservedly withdrawn.

A member without any request from him had had left at his house various articles connected with his dental profession. Demands for return of the goods or for payment were ignored by him, and as a result county court proceedings were commenced against him. The Society considered that this was a case which should be defended on behalf of the member in the interests of the profession in general, and, on the plaintiff's solicitors being written to informing them of the intention to defend, the proceedings were immediately abandoned.

A Scottish member of the Society was dismissed by his parish council from the appointment of parish medical officer, but the consent of the Scottish Board of Health had not been obtained. The case was fully considered and was reported to the Scottish Board of Health and an inquiry requested. Through the Society's Scottish agents the case was very fully investigated, a large number of witnesses were obtained on the member's behalf, and a full inquiry was held by the Scottish Board in a remote Scottish island, with a result that the member's dismissal was quashed and his reputation entirely upheld.

A member received a solicitor's letter accusing him of having disfigured a patient's face by negligent use of X rays for the removal of superfluous hair. After inquiry it was found that the disfigurement had been caused by various quack remedies which the patient had used and not by the X rays. The findings were sent to the patient's solicitors and no further communications were received.

A member received a letter from a solicitor demanding an apology and compensation for making "malicious and slanderous statements" about his client in the presence of a number of students. Inquiry showed that the patient had been seen by the member's deputy at a hospital out-patients' department, where the cause of the patient's disease was discussed and blood was taken for the Wassermann test. The solicitor was told that it was absurd to suggest that a doctor was actuated by malice because he took steps to exclude the possibility of the patient's illness being due to a serious constitutional disease. No further action was taken.

With regard to medical secrecy, the council considers that it is the duty of a medical man *not* to disclose the nature or circumstances of the disease or illness from which his patient is suffering unless he is satisfied that the inquiry is made by a near relative who has a bona-fide obligation to maintain the patient or to assist in securing the comfort or the recovery of the patient. Such disclosure is not to be made in any case where the patient is able to consent and has not actually consented. This rule does not apply when there is a statutory obligation to disclose (this includes insanity and notifiable diseases), or where the disclosure is ordered by a competent court of law.

A member was called to a woman suffering from an obscure abdominal condition. The patient's husband, in the patient's presence, told the doctor that he (the husband) had gonorrhœa and had infected his wife. Some time later the doctor was asked by a solicitor to give evidence on behalf of the wife in divorce proceedings. Our member asked whether he ought to give evidence in the case. He was advised that, as the husband did not give the information about himself as a patient, and as his patient (the wife) wanted him to give evidence, he might properly do so.

In the present unsatisfactory state of the law, the Society is unable to do as much as could be wished in the way of suppressing unqualified practice. Where, however, the law provides a trustworthy remedy against unqualified practice, the Society is always ready—on the request of a member, backed by sufficient evidence—to put the law in motion.

A member asked whether he might properly send patients for treatment to a radiologist who did not possess a medical qualification. He stated that the radiologist was experienced and did work for a hospital. He was told that he could not be held legally liable for negligence in having suggested to his patient that he should go to the radiologist, because he had good reason to think the radiologist was entirely competent. He was, however, further advised that the General Medical Council would hold that a practitioner must either retain or denounce responsibility for the treatment of his patient. If he retains it he must supervise the treatment given on his direction by an unqualified person; if he definitely renounces it, the patient on his own responsibility may seek treatment where he will.

The Society issues a warning against laxity in granting medical certificates under the National Health Insurance Act, which is very seriously regarded by the General Medical Council and by the Ministry of Health. "In our experience," the solicitors state, "members, on the grounds of humanity and with a view to alleviating the lot of their poorer patients, are tempted to stretch a point in the patients' favour, and they should be warned against so doing as they are taking a risk which may seriously affect the whole of their professional career."

ROYAL COMMISSION ON NATIONAL HEALTH INSURANCE.—The twenty-eighth meeting of this Commission was held at the Home Office, Whitehall, on May 14th, Lord Lawrence of Kingsgate in the chair. Evidence was given on behalf of the National Medical Union by Dr. Vivian Greenyer, chairman of the Council of the Union, and Dr. Charles Thornton Comber, member of the Council; and on behalf of the Scottish Medical Guild by Prof. William Russell, President of the Guild, and Dr. Frederick Porter, secretary. These witnesses submitted various criticisms of the health insurance scheme on its medical side, and urged a reversion to private arrangements, except for necessitous persons for whom a State medical service should be provided. Thereafter Dr. Harry Roberts gave evidence as to the working of the Act in a large panel practice in Stepney, and Lieut.-Colonel Bickerton-Edwards submitted a number of suggestions for organising medical treatment and improving the conditions of the insurance practitioner. Proof copies of the oral evidence and the relative statement submitted at the meeting of April 30th are on sale at H.M. Stationery Office (3*s.*).

Annotations.

"Ne quid nimis."

POPULATION.

THE population of England about A.D. 1000 was something like 1½ millions; it slowly grew to nearly 9 millions in 1801, and then jumped up till it reached 38 millions in 1921. A hundred years ago Great Britain had twice the population of Ireland; now it has ten times as many people. Which, Mr. A. M. Carr-Saunders says in a recently published volume,[1] is a thing the like of which has, as far as is known, never happened before and will, as far as may be guessed, never happen again. The theoretically possible multiplication of mankind is infinitely great compared with the available area of land and its utmost imaginable fertility. Birth restriction, Mr. Carr-Saunders holds, is a necessity, and the customs of primitive peoples show that it has always been practised; the modern mind differs from the ancient only in asking for reasons instead of being content with religious or customary sanctions. The author is a classical Malthusian, and his argument centres round the proposition that the best number of people is that which gets the largest return out of collective human work and so achieves the highest general standard of material and spiritual life. Nomadic life fills the world with n persons per square mile, agriculture with $2n$ or $10n$, according to its development, industrial concentration with $100n$ or $1000n$. Whether any part of the world is overpopulated or not depends therefore on the control which man can exert over his environment. That this will increase may be presumed; it appears likely that the population of this country is reaching, or has already reached, a stable condition; there is no need for alarm, but a great necessity that the situation should be studied and understood. Such is, briefly, the main thesis of a most excellent little book. The author states the questions and argues them very clearly and gives us one of the best half-crown's worth we have ever seen. Population, birth control, urbanisation are matters in which a great variety of people take, and ought to take, an interest; they are of national and international significance, and if such a book as this were widely read we should do away with some of the nonsense that is talked and printed about them. The book is short and in places necessarily dogmatic; it gives, however, an admirable survey which will incite the reader to go further and tudy some of the works given in the bibliography at the end, in which, curiously enough, there is no mention of the author's larger book "The Population Problem," published by the Clarendon Press in 1922. On one point only would we offer a suggestion. Mr. Carr-Saunders points out that nations desire to be big because they so add to their prestige, because they like as many people as possible to be of the same ideals and prejudices as themselves, and because they can more easily wave the big stick. He entirely omits the point which appeals strongly to the biologist, and especially the biometrician—that large populations are more likely than small ones to contain those exceptional variants on whom the progress and guidance of the world so much depend.

SIGNIFICANCE OF MANY TUBERCLE BACILLI IN THE SPUTUM.

IT is generally assumed that the number of tubercle bacilli in the sputum is directly proportional to the severity of the disease. Another common belief is that the appearance of these bacilli varies with the severity of the disease, short and homogeneous bacilli being supposed to be indicative of severe disease, whereas granular and moniliform bacilli are supposed to be coughed up by patients whose disease is comparatively slight. To provide a statistical verification of these views, Dr. T. Stefani and Dr. J. Stefani,[1] of Montana, have compared the clinical with the bacteriological findings at their sanatorium in the period 1898–1923. Of the 1430 patients treated, only 781, or 55 per cent., were sputum-positive. There were 303 patients in whose sputum tubercle bacilli could not be found, and 346 who did not provide sputum for examination. In 70 per cent. of the 781 sputum-positive cases, the views referred to in the opening sentences of this annotation were confirmed. Cases in which the disease was slight were marked by a paucity of tubercle bacilli in the sputum, cases in which the disease was severe were marked by the great number of bacilli, and according as the patients became better or worse, the number of the bacilli in the sputum became less or greater. In 8 per cent. these correlations were reversed, and in the remaining 22 per cent. the dwindling or augmentation of the numbers of bacilli in the sputum bore no uniform relationship to the clinical course of the case. A comparison of the appearance of the bacilli with the course of the disease showed that in 60 per cent. of all the sputum-positive cases the orthodox teaching held good. When the disease was slight, most of the bacilli were granular, when it was severe, they were short and homogeneous, when the patient was getting better, granular bacilli replaced the homogeneous bacilli, and when the patient became worse homogeneous bacilli again appeared. In 18 per cent. these correlations were reversed, and in the remaining 22 per cent. no uniform parallel could be drawn. By combining the two factors—both the number and the appearance of the bacilli in the sputum—the authors of this interesting paper show that in as great a proportion as 80 per cent. a clue is given by the microscopic examination to the prognosis. Their painstaking research is confirmatory of views held for a long time. It is so much less exciting to confirm than to subvert old teachings that the authors are to be congratulated on having conducted investigations without that incentive to work which some of us find in the prospect of proving another in the wrong.

INSULIN AND INFECTION.

THE article in our present issue by Dr. R. Carrasco-Formiguera, of Barcelona, on the amount of insulin required in the treatment of the surgical complications of diabetes and Dr. G. Graham's article on the relation of infection to diabetic coma in the current number of the *Quarterly Journal of Medicine*, both draw attention to the relation of sepsis to diabetes and of the necessity of giving an adequate amount of insulin. Dr. Carrasco-Formiguera points out that there is an impression abroad, for which he regards Dr. E. P. Joslin of Boston as partly responsible, that insulin is of little value in the presence of sepsis. He thinks that this is solely due to the use of an insufficient amount of insulin, although the dose given by Dr. Joslin—namely, 80 units in the day—would be considered a large dose under ordinary conditions. The amounts which Dr. Carrasco-Formiguera has used have been very large. Thus in one case in which a carbuncle was present on the neck, no less than 240 units were given on the first day although no food was taken. During the next week 200 units were given each day together with increasing amounts of food. Although the patient recovered in this case, it does not follow that a diabetic patient will always recover from another disease, however well the diabetic condition is handled with insulin. When such large doses of insulin are being given it is advisable to have estimations of the blood-sugar made at least once a day if possible and to test the urine for sugar every two or three hours. In an emergency

[1] Population. By A. M. Carr-Saunders. London: Oxford University Press. 1925. Pp. 111. 2s. 6d.

[1] Schweiz. Med. Woch., April 23rd, 1925.

it is safe to give large doses of insulin provided that the urine is tested in this way and that insulin is not given when the urine contains no sugar, provided always that the symptoms and signs of insulin hypoglycæmia are clearly recognised and its treatment remembered. Dr. Graham also found it necessary to give large doses of insulin, although his maximum dose was only 160 units in the day. The point which he has made is the relation of an acute infection to the onset of diabetic coma. In seven out of nine cases of coma an acute infection was present, but was only obvious in two cases on admission to hospital. In two cases a definite pathological lesion would have been discovered at an autopsy if the patient had died in coma, while in three cases it is probable that no lesion would have been discovered, since the signs of an otitis media in one case and of an abscess in the antrum of Highmore in another did not appear until some days after the patients had recovered consciousness. These observations show the importance of searching for an acute infection whenever the patient shows diminished sugar tolerance or becomes comatose. Dr. Carrasco-Formiguera describes the beneficial effects which took place in the healing of a large wound following small doses of insulin, although the diabetic condition was obviously of the mildest. This is a point which needs further investigation, since insulin may prove to be of definite assistance to the surgeon in the treatment of chronic wounds.

THE TREATMENT OF CHRONIC DRUNKARDS.

THE treatment of the chronic drunkard is always a difficult problem and on the whole the solution in this country along the lines laid down by the Inebriates Acts of 1879–99 seems to be fairly satisfactory, particularly when compared with the state of affairs in France, for example. In that country the number of chronic drunkards is increasing very rapidly, and Prof. Maurice Letulle last year made a striking appeal for the provision of "drinkers' asylums," [1] where these unfortunate creatures may be kept under restraint and suitably treated, for at present, unless the drunkard is definitely insane or unless he commits some criminal offence under the influence of drink, he is given no chance of placing himself under any restraining régime. In England there is likewise no system of compulsory restraint for the non-criminal drunkard, but there exist certain homes for inebriates where private patients are received as well as those who apply for admission under the Inebriates Act, and the forty-first annual report of Dalrymple House, Rickmansworth, which we have just received, illustrates effectively the beneficial results of restraint on these cases of alcoholic addiction. During the last year 59 patients were admitted to this home, 51 as private patients and eight under the Act. All were cases of alcoholic excess, and the absence of drug case admissions is attributed by the medical superintendent, Dr. F. S. D. Hogg, to the carrying out of the Dangerous Drug Act regulations, which he considers have so reduced the incidence of cases of habit-forming that further amendments to that Act are unnecessary. We referred in commenting on last year's report to the fact that the after-history of 1645 cases showed that 40 per cent. were doing well, and inquiries with regard to the results of treatment amongst those who have been discharged during the last few years show that 56 per cent. were definitely doing well, excluding those cases about which no information could be obtained. Dr. Hogg remarks upon the alteration in the symptoms of excessive alcoholism which has taken place within recent years, particularly in cases of even moderate spirit-drinking. Toxic symptoms, such as partial blindness, loss of memory, delusional states associated with early excitement and slow recovery, are more frequent than hitherto, and it is suggested that this is due to the adulteration of whisky with cheap deleterious alcohols by certain dealers being now a more frequent practice than before the war. It has, however, recently been pointed out [2] by Dr. R. Hunt, of the Harvard Medical School, that the toxicity of "boot-leg" liquors submitted for analysis was sufficiently accounted for by their content of ethyl alcohol. The beautiful situation of Dalrymple House, as shown by illustrations to this report, the indications that the social side receives careful attention, the provision of a workshop, &c., all emphasise that one of the important factors in the treatment of chronic alcoholism is environment. The other important factor, that of régime, doubtless receives due attention at the hands of those who have made a long study of this disorder, but it would be interesting to know if the hours of meals, for example, as set out in this report, are rigidly adhered to, for the 14 hours which appear to elapse between dinner and breakfast must feel long to those with a morbid craving.

[1] Le Progrès Civique, July 12th, 1924, p. 984.

THE FOOD VALUE OF CEREAL FOODS.

IT has long been known that rickets tends to develop most readily in children fed on diets which contain much carbohydrate, especially when the content of protein is also low. Feeding with condensed milk has been supposed to be particularly liable to lead to the development of rickets, and the main lines of treatment now recognised are to increase the amount of anti-rachitic vitamins, to give plenty of sunlight, and to bring about a proper balance between the protein and carbohydrate of the food. Investigations by Prof. E. Mellanby have shown that puppies develop rickets most readily when large amounts of bread are eaten, and subsequent experiments showed that the calcification of bone depends on the operation of several factors. These factors have been recently discussed by him in a Green book (No. 93 of the Medical Research Council Special Report Series), which was summarised in THE LANCET of April 11th, p. 789. In an investigation on the comparative influence of different cereals on the development of rickets, he has produced what appears to be incontrovertible evidence that the carbohydrate content of the diet is by no means the only factor concerned. First there is the confirmation of the view that when the anti-rachitic vitamin is deficient, increasing the cereal content of the diet leads to the production of far worse rickets. Next it is shown that the different cereals show great individual differences in their rickets-producing effects under such conditions, the least detrimental being wheat, the worst by far being oatmeal—a statement which, as our Scottish correspondent pointed out not long ago, has raised a storm in the porridge-bowl. Prof. Mellanby's experiments seem to show that these cereals exert a definite pro-rachitic influence on bone development, which influence can be wholly or in part antagonised by the anti-rachitic effect of vitamin A or sunlight. The anti-rachitic effect of cod-liver oil is far greater than that of other sources of vitamin A, though egg yolk and milk are also potent. So also are various calcium salts, especially the carbonate and phosphate, when taken with butter. It is claimed that the pro-rachitic effect of oatmeal, which is exhibited in spite of the fact that it contains much more calcium and phosphate than wheat, is due to the fact that it contains a substance, or on digestion yields a substance, which exerts a definite inhibitory effect on bone formation. The calcium content of the diet, provided there be enough calcium for bone formation, appears to be of secondary importance. The essential fact is that, in order to avoid rickets, the diet must show proper balance, there must be enough calcium and phosphorus, anti-rachitic vitamins must be present, and there must not be an excess of the cereal component of the diet, which would, by supplying a pro-rachitic factor, oppose the normal growth and formation of bone.

[2] Jour. A.M.A., April 18th, 1925.

As Prof. Mellanby says, "there is a constant battle going on among dietetic elements as regards the calcification of bone, some substances stimulating and others preventing the process, and the ultimate structure of the bone is the outcome of the conflict."

The final word on this matter may not be said for a long time to come. Prof. Mellanby has performed a great amount of careful experimental work, which is worthy of serious consideration, and has raised issues of which we had not previously thought. But, on the other hand, it is certain that his results should be applied with caution to problems of human dietaries. The great amount of prominence which has been given to work on the vitamins, and to allied questions in the science of nutrition, largely on account of the conditions of restriction of choice which were imposed on us by the war, is in danger of leading to an exaggeration of their importance. Everyone who has worked on nutrition will admit that in a properly chosen diet the vitamins will look after themselves, and it is only under special circumstances that it becomes necessary to take special vitamin-containing foods. Without question the same applies to the regulation of diet in connexion with the prevention of rickets. While Prof. Mellanby's results have undoubtedly great scientific value, they are in danger of being misunderstood by lay people, many of whom take a great interest in diet. It must not be forgotten that the diets given to the puppies under experimental conditions are highly abnormal diets for such animals, and would not be chosen voluntarily by them. It might be suggested, for instance, that a diet of meat would probably lead to definite disturbances in the economy of a growing human infant, but it would be foolish to argue from such an experiment that meat is an unsuitable article of diet for puppies. Conclusions from these valuable and suggestive experiments should not, then, be pushed too far, and it must not be forgotten that Prof. Mellanby would certainly be the last to apply them unreservedly to human nutritional problems. The matter must be subjected to further careful investigation before we can say how far they can be applied.

THE ADMINISTRATION OF PURE OXYGEN.

IT is not often that pure oxygen is administered to patients, but when such administration is required it has long been the custom to use the ordinary apparatus for nitrous oxide anæsthesiæ, substituting a cylinder of oxygen for one of gas. This method was used by Beddard and Pembrey [1] in their early work on the effect of oxygen. Its practical disadvantage as a routine method in the wards is that it requires the constant supervision of a nurse to regulate the flow of oxygen to keep the bag filled. The advantage of Haldane's apparatus, which came into use at the end of the war, was that the expiratory valve on the mask also acted as an air inspiratory valve, as required, so that if the supply of oxygen suddenly ran short the patient would breathe atmospheric air, and constant supervision to prevent suffocation was not necessary. Some oxygen is, of course, lost by this method. Dr. H. W. Davies and Dr. A. R. Gilchrist have recently in THE LANCET [2] elaborated the older method by adding a flow metre to measure the oxygen, a reducing valve on the cylinder to steady the flow, and an adjustable opening to the mask, so that the concentration of oxygen in the air breathed can be varied. Such alterations, though presenting obvious advantages, may still lead to certain practical difficulties, and it would be interesting to know if they have been met. Is constant supervision of the apparatus still necessary? Reducing valves are very apt to leak, since the junction between valve and cylinder head has to stand the total internal pressure of the cylinder. Again, the Haldane reducing valve offers so much resistance that the last part of the oxygen of the cylinder often fails to escape. Have these facts been taken into account? While everyone who has studied the subject would agree with the authors that the method of giving oxygen by a funnel is useless, it does not necessarily follow that the extremely simple method of giving oxygen through a nasal catheter or a tube passed into the mouth should be condemned. No reducing valve is required, and the rate of flow can be gauged by the rate at which the oxygen bubbles through water in a bottle, though a flow meter is preferable. Such a method will not give pure oxygen and there will be some waste, but the inspired air will be considerably enriched and the patients benefited. When *pure* oxygen is required, the method of gas-bag with mask and valves in some form or other is essential. Perhaps the chief indication for pure oxygen is coal-gas poisoning, since the higher the concentration of oxygen the more readily will the CO be excreted from the body and the patient recover. Dr. Leonard Hill and Dr. Argyll Campbell, in their paper in the same issue of THE LANCET, mention Dr. Haldane's observation that a mouse poisoned with CO can be kept alive in pure oxygen under two atmospheres of pressure. The technical difficulty of administering oxygen under pressure to patients is considerable, and fortunately in coal-gas poisoning pure oxygen under atmospheric pressure is good enough. However, the use of oxygen under increased pressure may be of advantage, since it has been pointed out that a perfect gas and oxygen anæsthesia with no cyanosis can only be obtained by such means. The reason is that such a high concentration of nitrous oxide is necessary for the anæsthesia, that the oxygen must be deficient if the ordinary atmospheric pressure is used, and visions have been conjured up of surgical operations being carried out in a steel chamber. An alternative method is to choose a gas with greater anæsthetic power, such as ethylene, so that perfect anæsthesia by means of ethylene and oxygen without oxygen-want may be obtained. Unfortunately, ethylene is highly inflammable, though there is every prospect that with proper precautions it may come into regular use for special cases.

[1] A. P. Beddard and M. S. Pembrey: Brit. Med. Jour., 1908, ii., 45.

[2] THE LANCET, May 2nd, 1925, p. 916.

CRIPPLING DUE TO FRACTURES: THE REMEDY.

THE Lady Jones Memorial Lecture in Orthopædics in the University of Liverpool was delivered this year by Sir Robert Jones on May 12th before a large and representative audience of the medical profession. The lecturer chose as his subject Crippling Due to Fractures, its Prevention and the Remedy. After some preliminary remarks designed to emphasise the great frequency of preventable deformities after fractures, he dealt with the different types of disablement that might be present and the simple way in which most of them could be obviated. He instanced more particularly the serious results following badly treated fractures of the neck of the femur, the supracondylar region of the humerus, and the lower end of the fibula. He pointed out plainly that students were not adequately trained in the treatment of fractures and that this was often because the general surgeon had not the interest in nor the up-to-date knowledge of the treatment of fractures necessary if the subject was to find the place in his teaching which its importance to the man in practice demanded. To some extent this was inevitable, as the field of general surgery was now too large to be profitably traversed by any one man. The lecturer then entered a plea for a better thought-out and more efficient scheme for the education of the student. Every teaching hospital, he said, should have its special fracture department—usually, no doubt, in association with an existing orthopædic department. It should be under the charge of a man of consultant rank or if shared between several, an assistant of high standing should be appointed, whose specific duties should be the supervision of the department under his various chiefs. The department should include ward accommodation and out-patient rooms in

close contact with the X ray and physiotherapy departments. A house surgeon and a permanent specially trained sister were, of course, essential. The lecturer held that attendance of senior students on at least a dozen demonstrations and classes for practical instruction should be compulsory. It was estimated that in a general hospital 10 per cent. of the beds should be set aside for the treatment of fractures. Should this be found impossible it was far better that hospital authorities should frankly disclaim responsibility. Wards could then be secured in Poor-law hospitals, and properly staffed and equipped these could be brought into vital connexion with the teaching schools.

THE LEICESTER PRIVATE HOSPITAL.

ON May 20th a private hospital was opened in the Regent-road, Leicester, following a largely attended reception, arranged by the Leicester Medical Society. The hospital is the gift of Mr. T. Fielding Johnson, formerly chairman of the Leicester Royal Infirmary. The object of the donor has been to make available for the use of private patients the advantages of a modern hospital, and the medical profession know well how exactly such institutions meet the present-day needs. The position of those who require hospital treatment, while they definitely cannot expect that their needs should be met by a charitable institution, though domestic circumstances preclude treatment at home, has hardly received the public attention that it deserves. At the relief of this position Mr. Johnson's generosity is directed, and he is to be much congratulated upon its sensible nature. The new institution has been built and equipped as far as possible with the facilities and conveniences of a voluntary hospital, and, the capital outlay having been found, it is intended to be managed on a self-supporting basis in regard to future maintenance and upkeep, there being accommodation for 50 patients, mostly in single rooms. All medical practitioners can recommend their patients, for whom there will be no restriction in the choice of doctor, and provision has been made for the reception of maternity cases as well as medical and surgical patients. We look forward to receiving an early report upon the working of this institution, for its success may prove a stimulus to communities as well as individual donors.

AN UNSUSPECTED EFFECT OF AIR POLLUTION.

IT is now well known that a large proportion of the water supplied by the Metropolitan Water Board is treated with a minute quantity of chlorine in order to facilitate bacterial purification, and the same method has been adopted by a considerable number of water authorities. The only objection to the process is that even when the chlorine is added in the proper proportion the water on occasion acquires an iodoform flavour and sometimes a distinct odour of this compound. The cause has been an entire mystery until an acute observer, Mr. B. A. Adams, F.C.S.,[1] noted that the odour and taste only occurred under certain meteorological conditions, and that rain-water collected under these conditions when chlorinated acquired the same characteristic odour and taste. His further researches revealed the fact that the taste and odour were due to a trace of phenol or an allied body, doubtlessly taken up from the smoke-contaminated atmosphere. With pure phenol he found that when added to a pure water in the proportion of one part to 1000 millions of the water, the taste was marked directly after adding the chlorine, but that a lady could detect 1 part in 2000 millions. These remarkable results have been more than confirmed. Experimenting with waters of different types it was found that practically every person could detect an iodoform odour when the phenol was 1 in 1000 millions of certain waters and some could detect a taste when the proportion was 1 in 5000 millions. The latter proportion represents 14 grs. of phenol in 1 million gallons of water, and it seems quite possible that water exposed to air in an open reservoir could take up this quantity from the atmosphere under certain conditions such as Mr. Adams found were necessary to cause the water to give the iodoform flavour when chlorinated. The nature of the body found capable of giving this flavour is uncertain, but its intensity is obvious when it is found by calculation that one five-millionth of a milligramme is capable of being detected by the taste. It is obvious that such tastes could be prevented in two ways, either by excluding the water from contact with air or by preventing atmospheric pollution from smoke. The one is in most cases possible, the other at the present practically impossible, but the fact above recorded may be of interest to the Meteorological Office Advisory Committee on Atmospheric Pollution. Smoke-contaminated air when bubbled through pure water causes it to give the iodoform reaction with chlorine, and this may suggest another method of determining the extent of the pollution of air by smoke.

[1] The Medical Officer, March 21st and May 2nd, 1925.

BROADCASTING HEART SOUNDS.

UNDER the supervision of Dr. R. Lutembacher, who is well known in Paris as a heart specialist, the beats of one healthy and six diseased hearts were recently broadcasted from the Eiffel Tower station. Dr. Lutembacher has hopes that in the future by this means a doctor may be enabled to follow the progress of a patient, though he does not suggest that a complete diagnosis of a case previously unseen would be possible. He declares that by the aid of an amplifier a patient's heart beats are clearly audible over an ordinary telephone. A further valuable feature of such experiments is that they may bring the country doctor and the hospital specialist into closer touch. This experiment is said to be the first of a series. We recorded attempts on similar lines at Bristol and in Charlottenburg last year (THE LANCET, 1924, i., 861). Radio transmissions have since been carried out on several occasions by the Welsh National School of Medicine from the British Broadcasting Company's station in Cardiff. On one occasion two cases with well-marked cardiac bruits were correctly diagnosed by a medical man in Somerset. However, the aim of these transmissions was not so much to test the value of broadcasting heart sounds for the purpose of diagnosis of progress as to obtain information with regard to their magnification many hundreds of times by means of thermionic tubes. If a high degree of amplification without distortion is possible, then we have a new line of approach for investigating the nature of these sounds. It is possible that further light may be thrown upon the mechanism of their production or that vibrations hitherto undetected may be revealed. In exceptional circumstances the broadcasting of a patient's heart sounds might be of benefit, in that expert opinion not available at the bedside might be obtained from a distance. But it is probable that a short account of the patient's condition and symptoms would be more likely to bring help than the transmission of his heart sounds through the ether.

THE next session of the General Medical Council will commence at 2 P.M. on Tuesday, May 26th, when Sir Donald MacAlister, the President, will take the chair and give an address.

THE house and library of the Royal Society of Medicine will be closed on Whit-Monday, June 1st.

GRESHAM LECTURES.—A series of four lectures on the History of Medicine from the Earliest Times to the Mediæval Period, about A.D. 1400, will be delivered by Sir Robert Armstrong-Jones at Gresham College, Basinghall-street, London, E.C., on Tuesday, May 26th, Wednesday, May 27th, Thursday, May 28th, and Friday, May 29th (with lantern slides on this day), at 6 P.M.

Modern Technique in Treatment.

A Series of Special Articles, contributed by invitation, on the Treatment of Medical and Surgical Conditions.

CXXIII.—TREATMENT OF DEFORMITIES DUE TO INFANTILE RICKETS.

THE deformities due to infantile rickets commonly met with in practice and requiring treatment are the early stages of spinal curvature, genu valgum and varum, tibial curves, flat-foot, and, rarely, curvature of the bones of the upper extremity. Thoracic deformities require no treatment, and true rickety coxa vara is rare, though the possibility of the occurrence of this and of pelvic deformity is an additional reason for a period of recumbency during the treatment of the active disease.

General Treatment.

During the active period, whether deformity is present or not, the general scheme of treatment is relief from weight-bearing, without curtailment of muscular action, open air and sunlight, corrected diet, and cod-liver oil. This combination is best obtained in one of the many excellent country hospital homes or children's orthopædic hospitals now available.

The above indications can be met, under institutional conditions, by fastening the infant on his back to the cot with a light shoulder harness, which prevents him sitting up or rolling over, but leaves his limbs completely free. He lives in the open air wards with the lightest possible coverings consistent with adequate warmth in winter and at nights—completely in the open, with no coverings, in the day in summer. Helio-therapy is given to those who pigment well. The diet is fat-containing, modified according to age, and generally supplemented by cod-liver oil. The limbs are massaged, and deformities, if present, moulded, but not splinted. It is not advisable to divide or fracture bones during active rickets. Signs of active disease disappear, usually, in three months. The best working test of this is the return of the X ray appearances of the lower radial epiphyses to normal. The child is then allowed to sit and stand, and later, deformities, if persisting, are dealt with by one of the methods given below. Treatment on these lines prevents the formation of deformities and often results in spontaneous disappearance of those already present. When the child has to be treated at home a similar régime should be attempted. Artificial may be substituted for real sunlight. The mother is instructed to keep the child off his feet at least part of the day, the diet is corrected and supplemented, and cod-liver oil given. I am not in favour of splinting the legs to prevent walking, as this limits the valuable effect on metabolism of muscular contraction, and the possible prevention of some increase in deformity is not, in my opinion, sufficient compensation.

The treatment of the common deformities which have persisted in spite of, or arisen for lack of, treatment on general lines must now be considered.

Spinal Curvature.

This is usually (1) a kyphosis in the lower dorsal region, or (2) lateral curvature in the upper dorsal region and at the dorsi-lumbar junction. These are postural deformities, the latter caused by habitually carrying the child on the same arm—the former by sitting.

In kyphosis, immobilisation on the back, as described during the active stage, is sufficient to prevent further deformity. Later, and in the case of older children untreated in the early stages, a course of Swedish remedial exercises is given, and a light Jones brace may sometimes be beneficial till muscular control is improved. Kyphotic children should have school desks at which they can sit upright, and errors of refraction, especially myopia, should be corrected.

Lateral curvature is treated in the early active stages on a plaster bed holding the spine straight or slightly curved in the opposite direction. Subsequently, Swedish remedial exercises are given by a trained masseuse, and, if there is any tendency to relapse, a moulded leather jacket should be worn, made from a cast of the body in suspension, with the spine held curved in the opposite direction to the deformity. This is put on lying down in the morning and only removed for exercises and at night. In more severe cases of scoliosis, with fixed structural deformity, institutional treatment is indicated for a series of plaster jackets to obtain the best correction possible, followed by Swedish remedial exercises and wearing of a moulded leather support to prevent relapse.

Genu Valgum and Flat-Foot.

I mention these together as they are often associated and the early treatment of each is similar. Genu valgum is a deformity produced and increased in the rickety child by standing. Flat-foot is caused by failure of the flabby musculature of rickets to develop the arch of the foot: a process which occurs in the normal child on beginning to stand and walk. The former deformity tends always to produce or increase the latter by faulty weight transmission. A slight degree of genu valgum is common, especially in girls, and, if not associated with flat-foot or an in-toeing gait, requires no treatment. An in-toeing gait is caused by the patient's efforts to support his weakening arches with his invertor muscles by inverting his feet as he walks, and is often a sign of early genu valgum. If these symptoms are present, or the genu valgum more marked, the boots should be raised ¼ in. or ½ in. on the inner side of the sole and heel by thickening the leather or adding wedges. The heel counter should be very accurately fitted, and, in some cases, the inner side of the upper may be specially stiffened to prevent treading over. The mother is told *never* to allow the child to stand without the altered boots on. If this is necessary for a few minutes in bathroom or bedroom, the child should learn (as children do easily) to stand and walk on the outer sides of his feet. Simple exercises should be taught to children over 3. The best for flat-foot are (1) with toes pointing inwards, rising on tiptoe and coming down on outer sides of feet, (2) walking on outer sides of feet, (3) (seated) raising and bringing together the forepart of the feet till the big toes touch, keeping heels on the ground, and a few inches apart. For genu valgum—double knee-bending and stretching with the feet separated. Young children with genu valgum should lie down for two hours or so in the day, with a small firm cushion placed between the knees, and ankles and knees tied together with slings or large handkerchiefs. If these measures fail, or if the genu valgum is more advanced, with a separation of say 3 in. and over between the internal malleoli, when the knees are extended and the femoral condyles touching, the alternatives are (1) instrumentation, (2) osteotomy of the femur. Thomas's knock-knee iron is the best instrument. In applying it, the knee, in extension (but not hyper-extension), must be first bandaged to the posterior bar and then pulled over to the lateral bar (which should be set out a little) by means of a webbing strap and pad of felt over the internal condyle as far as the patient will tolerate. The correction is increased as tolerance is established. The instrument corrects efficiently in a year or two if well supervised, but causes much lateral mobility of the knee and muscular wasting if worn night and day. This may lead to relapse unless careful observation, altered boots, and exercises are continued for a lengthy period. I now prefer osteotomy. This should not be done under 4 years of age. The femur is divided with an osteotome for three-quarters of its thickness and the remainder fractured. It is done from the outer or inner side, just above the condyles, with the knee flexed and a firm sandbag behind it. The limb is fixed at once in plaster in slight varum, with hip and ankle included. The plaster may be removed in eight weeks, and weight-bearing, modified by crutches or sticks for the first week, allowed.

Flat-feet in older children, which are painful, or in which the arch cannot be restored by muscular effort, should be put in plaster in full inversion and

dorsiflexion for a month and then treated by altered boots and exercises. If the flat-foot is rigid and the arch cannot be restored by manipulation, a preliminary wrenching under anæsthesia must be done until the foot is fully mobile and the arch can be restored. It is then put in plaster as above.

Genu Varum.

This is an outward bowing of the femoral and tibial shafts, causing wide separation of the extended knees when the feet are in apposition. It is not generally associated with flat-foot and tends to decrease with growth, so that treatment is not a matter of urgency. Should it persist after the age of 6, correction, if desired on cosmetic grounds, is obtained by osteotomies of the tibiæ first, followed by division of the femora later, if necessary.

Tibial Curvatures.

The commonest tibial curve (and the most characteristic deformity of rickets) is an antero-external bowing of the lower half or third of the shaft. This is a sitting deformity produced by the child squatting with legs crossed under the thighs. Less commonly the curve is anterior in the lower half, or, rarely, involving the whole shaft like congenital syphilis. Occasionally a tibial curve exactly compensates genu valgum and, functionally, these cases do not require correction. Straightening of the tibiæ for cosmetic reasons will have to be followed by correction of the unmasked genu valgum. Tibial curvature is an unsightly deformity and, if persistent after the age of 3 or 4, should be corrected.

The method of choice is *osteoclasis*. This is a simple procedure. Both tibiæ may be done at a sitting as shock is not great. Under full anæsthesia the point of maximum curvature of the tibia is applied to the narrow edge of a wooden wedge covered with a layer of wool. The weight of the body is suddenly thrown on to the hands, grasping the shaft of the tibia above and below the deformity, and the bone fractures with a crunching sound. A greenstick fracture is usually produced with bending or sometimes fracture of the fibula. Care must be taken in a low osteoclasis not to displace the lower tibial epiphysis by pressing on the foot. Occasionally the bone cannot be fractured by hand, in which case an osteoclast may be used, if available. Osteotomy should not be done immediately if manual osteoclasis fails, as the wound is liable to become infected owing to the preceding damage to the tissues. A firm bandage over wool should be applied and osteotomy deferred a week or so. After fracture the curve is corrected by moulding, but the line of the tibia should not be made too straight. There is normally a slight inward curve of the shaft. The leg is put in plaster immediately. This includes the knee, and the upper portion down to the fracture is allowed to harden slightly before the remainder, including the foot, is rapidly completed. This allows the final correction to be obtained by moulding before the lower portion sets. Any inward rotation of the lower fragment must be corrected at this point. The foot should not be dorsiflexed too much or an angulation of the fracture may be caused.

In older children, or when manual osteoclasis fails, the deformity is corrected by osteotomy. The leg is placed on a firm sandbag and the tibia partially divided with an osteotome subperiosteally, through a very small incision at the site of the deformity. Sometimes, especially in anterior curves, a wedge must be removed. The remaining bone is fractured, the small wound sutured, and the deformity corrected and put up in plaster as described.

Upper Extremity.

Deformities are rare but occur occasionally in the crawling stage of infancy. They are simple bends of the humerus or radius and ulna, and, if persistent after treatment in the active stage, can be corrected by osteoclasis and plaster fixation.

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Special Articles.

THE MILK-SUPPLY AND ITS IMPROVEMENT.

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I.—ESSENTIALS OF THE PRESENT POSITION.

THE present position can be summarised as follows:

1. The recent investigations on dietary essentials have increased the emphasis to be placed upon the value of milk as an article of food.

2. The consumption of milk per head of population in this country is very low. It is rather under one-third of a pint per head as compared with one pint in U.S.A.

3. The milk industry is capable of material increase and could be profitably expanded, with great advantage to the agricultural community, to meet the needs of an increased consumption.

4. While the medical profession as a whole is in favour of an increased consumption of fresh milk in the interests of the nutritional efficiency of the nation, its support cannot be given to an active campaign with this object because of its knowledge of the unsatisfactory quality of the present milk-supply.

5. The present milk-supply is unsatisfactory because, as regards the general supply: (*a*) No effective steps are taken to prevent human tuberculosis being acquired from milk derived from infected cows. (*b*) The conditions under which milk is produced fall a long way below what modern hygiene demands as necessary, and there is no effective control over the conditions of production. In consequence, ordinary market milk is heavily contaminated with bacteria, some of which are harmful and all undesirable. (*c*) The supervision of milk subsequent to production is inadequate, and many undesirable conditions exist.

6. While the distributory milk-trade is anxious to supply a better article it is unwilling, or unable, to control the quality of the milk which is supplied to it. In general it has improved its own methods, but these, in the main, consist in preserving an initially heavily bacterially contaminated article by artificial means, pasteurisation being largely employed.

7. Control over pasteurisation methods employed to preserve the saleability of contaminated milk is non-existent. Pasteurisation may effect its immediate object of prolonging the "life" of the milk without destroying pathogenic organisms.

8. There is no inducement to the individual milk producer to supply a better quality milk unless he has a local market and can earn a reputation for the quality of his milk. The great bulk of the milk produced receives the same price, clean or dirty.

9. The present conditions of milk production and distribution entail unnecessary losses upon the milk-trade, which in the aggregate are very considerable. If these could be measured a clean pure milk would probably be found to be advisable as a business proposition, apart from any health factors.

10. The existing legal powers to control and ensure a pure milk-supply are extremely unsatisfactory and wholly inadequate.

11. There is insufficient care of milk in the homes of the consumers.

12. The scheme of graded milks established under the Milk and Dairies (Amendment) Act, 1922, while of considerable educative influence, touches but the fringe of the problem and cannot be regarded as satisfying the needs of a pure milk-supply.

Most of these postulates are so well recognised that detailed consideration is unnecessary; others will require discussion to secure their acceptance.

Importance of Milk as a Food.

It is unnecessary to discuss the dietetic value of milk or the importance of its vitamins. In connexion

with vitamins in milk, recent investigations have shown that the vitamin content of milk is materially influenced by the food given to and the fresh-air conditions of the cows. A good milk requires, as one of its essentials, production under conditions which do not impair the vitamin content.

Consumption of Milk.

Between 1871 and 1914[1] the population of Great Britain increased by 60 per cent., but the number of cows and heifers by only 40 per cent. The total weight of dairy produce imported during this period increased from 2·5 cwt. to 8·5 cwt., an increase of 235 per cent. The same report gives the average daily consumption of milk per head for Great Britain as 0·25 pint liquid milk. This varied from 0·1 pint in Inverness to 0·31 pint for London.

In a coal-mining district (Rhondda U.D.) Dr. J. D. Jenkins[2] (the M.O.H.) gives the figures of milk consumption per head per day from 1915 to 1923 as 0·15 (1915), 0·14, 0·15, 0·105, 0·167, 0·167, 0·152, 0·165, 0·175 (1923). These figures show a progressive increase, but it is slight. Even the highest figure is less than one-fifth of a pint per head per day, and in nine years the increase is only one-fortieth of a pint per head.

There are no statistics that I am aware of dealing with the actual consumption in individual families, particularly in rural areas. In view of the importance of milk as a food I have instituted some inquiries in different villages in Somerset (a milk-producing county), limiting the investigations to families which comprise children at public elementary schools. The results are summarised in Table I.

TABLE I.—*Milk Consumption.*

Parish.	No. of families investigated.	No. of inmates.		Total weekly consump. in pts.	Average consump. per head in pints.		No. of families, with consumption:		Highest and lowest consump. per head per week.
		14 and under.	All.		Per week.	Per day.	Above the mean.	Below the mean.	
A	30	95	173	378	2·18	0·31	16	14	4·7—0·8
B	30	102	169	435	2·59	0·37	17	13	7·0—0·87
C	10	21	49	163	3·32	0·47	6	4	5·6—1·1
D*	47	92	221	674	3·05	0·44	24	23	7·0—1·0
E	29	72	166	416	2·50	0·36	16	13	5·25—0·9
F	14	50	82	228	2·78	0·40	6	8	7·0—1·4
G	10	32	57	124	2·17	0·31	4	6	3·5—0·9
T'tal	170	464	917	2418	2·64	0·38	—	—	— —

* D is a quite small town mainly occupied with gloving (population about 1000), the others are rural villages.

All the inquiries were made in January, 1925. The average consumption per head per day was 0·38 pint or practically one-third of a pint per person. This is above the calculated average for England generally, but these families all include children. Practically no condensed or dried milks were being used, so no allowance is necessary for this. Unfortunately, also, it was frequently the families with the most children who obtained the least milk. Table II. gives particulars of the number of children in the families consuming one-third or less than one-third of a pint per head per day.

Table II. shows that 42·4 per cent. of the families consumed one-third or less milk per head per day. The group of 170 families investigated included 45 with four or more children, and in 32 of these, or 71·7 per cent., the available milk per head per day was one-third or less pints. The larger the number of children and the greater the need of milk the less they received. The low average consumption in village A was connected with the fact that 11 of the 30 families contained four or more children, and in ten of these the milk consumption was less than one-third of a pint per head per day. Inquiries showed that there was no difficulty in obtaining milk, although a few of the children objected to drink it.

TABLE II.

Parish.	Number of children 14 and under in family.					All.	Per cent. of families investigated.
	1	2	3	4	over 4		
A ..	0	4	3	5	5	17	56·7
B ..	1	1	2	2	7	13	43·3
C ..	0	0	0	2	0	2	20·0
D ..	6	2	3	2	1	14	29·8
E ..	4	2	4	0	3	13	44·8
F ..	1	0	2	2	2	7	50·0
G ..	0	4	1	1	0	6	60·0
Total ..	12	13	15	14	18	72	42·4

The two essential causes of the low consumption are a failure to appreciate the importance of milk as a food and the cost, many mothers stating they were unable to afford more. The price paid was 2½*d.* to 3*d.* a pint in winter.

Increase in Milk Production in this Country.

Another Government report[3] states that in 1922 the total production of milk in Great Britain was estimated to be 1320 million gallons and the consumption of liquid milk at 650 to 700 million gallons, while the quantity of milk imported as represented by milk products is estimated at 1570 million gallons. In 1922 the estimated total consumption of milk and milk products was computed at 2890 million gallons, of which home production furnished 1320 million gallons, or approximately only 46 per cent. of the whole. There is a need for an increased production of milk to meet an increased use of milk which should be stimulated and to produce in this country what is imported from abroad. Agricultural authorities are of opinion that a very great increase of milk production is practicable.

The Dilemma of the Medical Profession.

If the consumption of milk is to be increased the support of the medical profession must be enlisted. At present the individual practitioner is in a dilemma. On the one hand, he knows the importance of milk as a food, particularly for children and for the sick under his care, and he favours a general increase in its consumption. On the other hand, he is well aware that most of it is produced under grossly insanitary conditions yielding a milk laden with living bacteria, some of which are definitely pathogenic. How can he recommend such a fluid in its raw condition? Again, he knows that boiled and heated milk is not the equal of raw pure milk. He is driven to accept the lesser evil and advocate milk only when boiled or efficiently pasteurised, but it is difficult and nearly impossible to secure his active coöperation as an apostle for its widespread consumption while conditions remain as at present. Graded milks form such an inconsiderable quantity of the total supply that he is not helped much thereby. I have felt the dilemma in lecturing upon milk, in connexion with health weeks, &c., having to devote the first part of my lecture to an exposition of the advantages of milk as a food and the latter half to an explanation of the necessity for a pure supply and the dangers of ordinary milk.

Tuberculosis from Milk.

It will be unnecessary, in view of the extensive literature on the subject, to do more than try and assess the extent of tuberculosis in man of bovine origin. The subject is discussed in detail by Cobbett,[4] while a very valuable paper by Stanley Griffith[5] gives

[1] Final Report of the Committee on the Production and Distribution of Milk, 1919.
[2] Annual Report M.O.H. Rhondda U.D.C., 1923.
[3] Departmental Committee on Distribution and Prices of Agricultural Produce. Interim Report on Milk and Milk Products, 1923.
[4] The Causes of Tuberculosis, 1917. Cambridge University Press.
[5] Bovine Tuberculosis in Relation to Man. Proceedings National Milk Conference, 1922, p. 71.

a clear statement of the present-day position. Tables III. and IV., summarised by Gauvain from Griffith's paper, are of great interest.

TABLE III.

—	No. of cases.	Human.	Bovine.	Percentage Bovine.
Cervical gland tuberculosis	116	62	54	46·5
Bone and joint tuberculosis in England ..	476	389	87	18·3
Bone and joint tuberculosis in Scotland ..	28	20	8	28·6
Lupus	126	62	64	50·8
Scrofuloderma	52	32	20	38·4
Genito-urinary	17	14	3	17·6
Tuberculous meningitis (cerebro-spinal fluid) ..	12	10	2	16·6
Pulmonary tuberculosis ..	229	226	3	1·31
Post-mortem material from 223 children under 12 years of age dying from any cause whatever — L.G.B. series:				
Cultures obtained in ..	113	93	20	17·7
Royal Commission series (fatal tuberculous cases)	46	27	19	41·3
	1215	935	280	23

TABLE IV.

—	Under 10 years of age.			Over 10 years of age.		
	No. of cases.	Human.	Bovine.	No. of cases.	Human.	Bovine.
			%			%
Cervical gland tuberculosis ..	47	14	33 (70·2)	69	48	21 (30·4)
Bone and joint:						
England	288	217	71 (24·6)	188	172	16 (8·5)
Scotland	22	14	8 (36·3)	6	6	0 (—)
Lupus	89	40	49 (55)	37	22	15 (40·8)
Total	446	285	161 (36)	300	248	52 (17·3)

It is possible from these figures to arrive at an estimate of the number of deaths due to bovine tuberculosis. Cobbett has made the calculation, and concludes that at least 6 per cent. of tuberculosis deaths are of bovine origin, or rather over 3000 deaths a year. As Sir Henry Gauvain points out, this is probably an under-estimate and will be found to be higher when larger numbers of cases of abdominal and generalised tuberculosis are classified according to the type of bacillus. In addition to the cases, which end in death, there is the immense number of cases with less fatal lesions, many of which are severely affected for years, while a good many die from other diseases. At least 50 per cent. of the gland tuberculosis cases are of bovine origin, cases which are not fatal as such.

Nearly all these bovine cases are of milk origin and we must agree with Gauvain: "There can be no question that bovine tuberculosis is a very fruitful source of disease in this country. No form of food-supply is the direct or indirect cause of more deaths, and for no food product is so little done to prevent infection as in the milk-supply of this country."

It is difficult to arrive at comprehensive facts as to the extent of tuberculosis amongst milk cows and the degree to which milking herds contain animals shedding tubercle bacilli into the milk-supply. Local reports as to the presence of tubercle bacilli in milk do not supply much grounds for believing that there is any material reduction, although facts suggest that in some areas there is a diminution. Probably there is about 1 per cent. of milking cows with tuberculous udders, and about 12–15 per cent. of mixed milk samples show living tubercle bacilli.

Considerable campaigns are now being launched and a great deal of money is, and will be, expended on dealing with cripples and other children suffering from tuberculosis. It may be philanthropy, but do not let us call it business or preventive medicine, to allow unchecked the manufacture of large numbers of cases of tuberculosis of bovine origin and then spend huge sums to try and restore these unhappy victims to a condition of health of which they should never have been deprived. To give but one example. In Shropshire their orthopædic work is a model to other counties, and during 1923 the sum of £4434 was paid by the county council for the treatment of surgical cases of tuberculosis. It we take the above figures for bone and joint tuberculosis as 20 per cent. bovine and apply this to the whole, £887 was spent on the treatment of a few of the cases of bovine tuberculosis, an expenditure which could be more advantageously employed in eradicating the sources of infection.

(*To be continued.*)

PROCEEDINGS OF THE ROYAL COMMISSION ON NATIONAL HEALTH INSURANCE.*

(*Continued from p. 1046.*)

EVIDENCE OF THE INSURANCE COMMITTEES.

EVIDENCE was given on behalf of the Federation Committee of the English, Scottish, and Welsh Associations of Insurance Committees by the Rev. W. D. Yoward, Mr. Edwin Potts, Mr. W. N. Marshall, and Mr. F. Llewellyn Jones (App. XXXVI. and Q. 12696–13142). Separate statements were put in by the two last named on behalf of the Scottish Association (App. XXXVII. and Q. 13143–13208), and on behalf of the Welsh Association (App. XXXVIII. and Q. 13209–13270).

This evidence is largely devoted to an account of the way in which medical benefit is administered by the insurance committees and contains many of the provisions of the acts and regulations which need not be reproduced here. It is stated that insurance committees have taken a very deep interest in their work and have displayed an active interest in all matters pertaining to national health, including a large share in health propaganda.

The staffs of committees were, at the outset, largely recruited from the offices of local authorities, and their earlier experience has proved most useful. The Associations claim that they should be directly represented on behalf of insurance committees on any body or conference negotiating the terms of service with the doctors. They consider that they should be brought into consultation from the commencement. The right of any medical practitioner to inclusion on the panel list should, they suggest, be restricted and an inquiry made before admission to the service where the insurance committee make representations

* In previous articles the proceedings of the Commission were reported under the following headings: Introductory Note; The Scope of the Insurance Scheme (see THE LANCET, Jan. 31st, pp. 247–8); The Provision of Medical Benefit (Feb. 7th, pp. 301–3; Feb. 14th, pp. 355–6; Feb. 21st, pp. 403–5); Financial Provisions of the Act (Feb. 28th, pp. 454–7); Medical Certification and the Regional Medical Staff (March 7th, pp. 508–9); The Approved Societies and the Money Benefits (March 14th, pp. 564–5; March 21st, pp. 623–4); Evidence of the Hearts of Oak Society (March 28th, pp. 677–9); Evidence of the National Conference of Industrial Assurance Approved Societies and of the Manchester Unity Approved Society (April 4th, pp. 731–3); Evidence of Independent Order of Rechabites, of Rational Association Friendly Society, and of Miners' Societies (April 11th, pp. 784–6; April 18th, p. 839); Evidence of Mr. Alban Gordon (April 18th, pp. 839–40); Evidence of Joint Committee of Approved Societies, of Stock Exchange and Lloyds' Health Insurance Societies, and of Group of Catholic Approved Societies (April 25th, pp. 889–91); Evidence of the National Insurance Beneficent Society (May 2nd, pp. 943–4); Evidence of the British Medical Association (May 9th, pp. 993–5); Evidence of the British Dental Association and other Dental Organisations (May 16th, pp. 1044–6).

References to the paragraphs in the printed statements issued as appendices to the reports of the oral evidence are given thus; "App. X. 69," and references to the oral evidence thus—Q. 1369.

to that effect. The doctors' representatives themselves would, it is said, welcome this as tending to improve the service. Amongst other things which would be the subject of inquiry would be the adequacy of the surgery and waiting-room accommodation.

In regard to medical certification, it was suggested that the issue of recommendations for treatment benefit—e.g., dental treatment—should no longer be restricted to occasions on which a certificate of incapacity for work is given. Penalties recommended by the insurance committees should not be varied by the Ministry without the insurance committees being afforded an opportunity of stating their views. Other alterations of machinery proposed included a simplification of the arrangements in connexion with the transfer of practices and an extension of the duties of regional medical officers in consultation in the earlier stages of illness.

With regard to administration, the Federation saw no necessity for the insurance medical service being placed in the hands of an authority which provides no part of the cost. An extension of the service to the dependants of insured persons would not, in itself, strengthen the argument for unification with the local authority services.

(Q. 13041.) Effective coördination and unity may be secured by coöperation between these bodies, strengthened by interlocking or reciprocal representation and by joint sub-committees, including arrangements for joint action by officers of these bodies.

Extensions of the Medical Service.

Insurance committees are of the opinion that the various treatment benefits should become primary benefits and be administered by the insurance committees. There should be a complete domiciliary service developed in the following order of priority: (*a*) Consultants and specialists; (*b*) diagnostic and treatment facilities (laboratories and clinics, &c.); (*c*) nursing; (*d*) dental treatment; (*e*) ophthalmic treatment; (*f*) additional appliances; (*g*) maternity services; (*h*) massage. Beyond these there should be provided hospital and convalescent home treatment, medical services for aged persons, and an extension to the dependants of insured persons.

The Federation were not prepared to give any estimate as to the cost of these proposals. They felt that there was money available in the scheme for some, at least, of these services. As regards an increased contribution to cover any part of the services, the witnesses said (Q. 13053): "We have not anything definite to put forward on that." Mr. Marshall added that in Scotland they were definitely against any increase in the contribution at the present time.

The separate Scottish evidence included the statement (Q. 13219) that if the health functions of insurance committees were transferred to County Councils, those bodies would not be able to cope with the work, as they are already overburdened. In regard to the present insurance medical service, it is stated (App. XXXVII., 26) that the local medical committees take a broad and, indeed, a generous view of the duties of the doctor to his patient.

Other statements of interest are as follows: (46) The Association is not satisfied that the mileage grant for Scotland is sufficient. (60) The Association believes that without in any way impairing efficiency, considerable economies in the supply of drugs to insured persons might be effected.

The Welsh evidence contains the suggestion that the Commission should be invited to consider the advisability or otherwise of the approval of new institutions for administering medical benefit. Evidence definitely recommending this course was put forward by the Glamorgan Insurance Committee in Appendix XXXIX.

Separate evidence was laid before the Commission by the Coventry Insurance Committee (App. XXXIII. and Q. 12237–12451), which included the suggestion that, with a more fully developed medical service, insurance committees might become related to the local authority more or less on the lines of the Education Committee.

The Cheshire Insurance Committee gave evidence (App. XXXIV. and Q. 12452–12659) on the detailed administrative work of a county insurance committee, the way in which the service might be extended, and the application to a county area of an attendance system of remunerating insurance practitioners.

The Leicestershire Insurance Committee (App. XXXV. and Q. 12660–12695) gave evidence especially on the extent to which the Insurance Committee had conducted health propaganda by means of posters, articles in the local press, appeals to the clergy and Sunday schools to coöperate during Health Week, and illustrated health lectures to school-children. They suggested that insurance committees could be especially useful in this direction, as they are directly concerned in the provision of medical treatment of the industrial population.

HOSPITAL OFFICERS' ASSOCIATION.

ANNUAL CONGRESS.

THE second annual Congress of the Incorporated Association of Hospital Officers was held on Friday last at St. Thomas's Hospital. After a brief address of welcome by the Hon. Sir Arthur Stanley, the congress was opened with equally commendable brevity by the President of the Association, Mr. W. H. Harper, house governor and secretary of the Wolverhampton and Staffordshire General Hospital.

The Rôle of the Auxiliary Hospital.

Viscount Hambleden then took the chair for the morning session, and Dr. F. N. Kay Menzies, Director-General of Hospital and Medical Services for the Joint Council of the Order of St. John of Jerusalem and the British Red Cross Society, read a paper on The Auxiliary Hospital: its Financial Aspect and the Extent to which it can Relieve Pressure upon Parent Hospital Beds, by himself and Mr. R. H. P. Orde. Their paper appears at substantial length on p. 1115 of this issue.

The discussion was opened by Mr. E. W. Morris, house governor of the London Hospital. While agreeing with the need for country annexes, he thought that insufficient attention had been given to matters other than financial which give them their value. Patients did much better in the country, but they always stayed much longer there than in the parent hospital. The weekly cost of a country bed was probably less than half the town cost, and there was the collateral advantage that pupil probationers could be taken in a women's annexe at the age of 19 and afterwards drafted for training into the parent hospital. On the other hand, a probationer who has entered at 21 and is being trained in the town cannot be sent to the annexe because all annexes have not a resident medical officer, and unless they have the General Nursing Council will not recognise them as training schools for nurses. Some of the town hospitals might combine to have an annexe large enough for a resident medical officer; otherwise the annexe must be run entirely by fully-trained nurses, which would be expensive. At the same time he felt that from the financial point of view there was a flaw in Dr. Menzies' calculations, though he could not put his finger on it.

Dr. H. L. Eason, superintendent of Guy's Hospital, agreed that every hospital ought to have many more auxiliary homes, but made the point that, even with a high daily average of unoccupied beds, the medical staffs of the London hospitals were very near the breaking point, and that if patients were got through the hospitals more rapidly that strain would be increased and it would be necessary to augment the nursing staffs. Whatever the other advantages of country annexes the idea that they would save money was illusory. To this opinion Mr. A. G. E. Sanctuary, administrator of the Radcliffe Infirmary

at Oxford, opposed the fact that about £1 per week per patient was saved to that institution by sending patients to its home of recovery. He suggested that the cottage hospitals might be used as annexes. Mr. Frank G. Hazell, secretary of Manchester Royal Infirmary, and Mr. G. G. Panter, secretary of the Royal Northern Hospital, bore witness to similar experience. Mr. Arthur Griffiths, secretary of the East Suffolk Hospital, Ipswich, said that it had been found at that institution that although the recovery hospital did not reduce costs, it expedited the complete recovery of the patient. The President declared that his auxiliary hospital not only reduced costs but enabled patients to return home three or four days earlier. Lady Wilberforce, hon. secretary of Marlow Cottage Hospital, thought that the auxiliaries should help in the training of probationers at an earlier age. Mr. Orde, co-author of the paper, having claimed that the financial advantages of auxiliary hospitals were admitted by the most practical economists, Lord Hambleden drew attention to a nursing difficulty. A large proportion of the cases sent to auxiliary hospitals are surgical, and it is not easy to find medical cases in sufficient number for the training of probationers to the satisfaction of the General Nursing Council. In his reply on the discussion, Dr. Eason thought that this difficulty might be removed by linking the nursing staff of the auxiliary with the parent hospital, probationers passing from the one to the other.

Contributory Schemes.

At the afternoon session, at which Dr. Eason presided, Mr. A. G. E. Sanctuary read a paper on the Effect of Hospital Savings and Contributory Schemes on Voluntary Contributions. Contributory schemes meant financial stability and consequent efficiency, and he argued that the intelligent philanthropist will more readily support an efficient institution which is holding its own financially than one which is struggling along on the verge of bankruptcy, and that consequently contributory schemes were likely to increase rather than diminish help from subscribers. He believed, indeed, that contributory schemes had saved the voluntary system from extinction; there were many hospitals that would have failed but for the establishment of these schemes.

Mr. F. B. Elliot, general secretary of the Hospital Saving Association, considered that Mr. Sanctuary had completely proved his case. The problem was peculiarly difficult in London owing to the multiplicity of hospitals and to their never having made it their business to work together. Mr. Elliot gave some significant figures of the progress of the Hospital Saving Association during the two years of its existence. In its second six months its workmen contributors expanded from 33,000 to 62,000; in March last they numbered 135,000, and were now close upon 150,000. In the first six months to January, 1924, the income was at the rate of £16,000 a year; in the first three months of 1925 it was at the rate of £76,000, and in April of £87,000. In reply to questions, Mr. Elliot stated that the working expenses amounted to rather more than 10 per cent., paid out of a guarantee fund. In the course of a useful discussion the question was raised whether hospitals benefiting by contributory schemes entered into a contract of service with the contributors, and Dr. Eason replied that there was no such contract either implied or in fact, and there was no certainty of admission. Patients presenting vouchers from the Hospital Saving Association were, however, exempt from all almoner's inquiries and made no payment to the hospital. The system had not, as some people had feared, flooded the out-patients' departments.

Mr. Harper reminded the conference that the Wolverhampton contributory scheme had been in existence for nearly half a century, and said that in the last ten years the amount raised by it had enormously increased. He had no belief in joint hospitals' councils and was strongly of opinion that contributory schemes ought to be worked from inside each hospital.

At the close of the congress the members were the guests at tea on the terrace of the House of Commons of Mr. George Harney, M.P., and Captain Styles, M.P., and in the evening they dined together at the Holborn Restaurant.

ROYAL SOCIETY CONVERSAZIONE.

SCIENTIFIC EXHIBITS.

A CONVERSAZIONE was held at the Royal Society on the evening of May 13th. A number of demonstrations was given and many exhibits of great interest and instruction were shown.

The exhibit of pure fused quartz ware by the Thermal Syndicate, Ltd., included the atmospheric type of mercury-vapour lamp for medical and research work, hypodermic syringes for flame sterilisation, and some optical quality fused quartz lenses.

The Cambridge Instrument Co., Ltd., showed some typical applications of the thermal conductivity method of gas analysis. The method depends essentially on the varying heat conductivity of different gases, this change being registered as a change in the rate of heat loss from a platinum spiral electrically heated and placed in the gas to be examined. Any alteration in the composition of the gas mixture, for example, oxygen and carbon dioxide, is reflected as a change of resistance of the wire provided that there is an appreciable difference in the thermal conductivities of the two gases, and this is the case with the two gases mentioned. The change in resistance may be conveniently recorded by means of a sensitive galvanometer. The principle was used originally in the Shakespear katharometer for the analysis of flue gases, and has recently been applied to biological work. For example, Prof. A. V. Hill has made use of this method for determining the percentage of CO_2 in the alveolar air. The measurement of the CO_2 production of a single fly was demonstrated on this occasion by the Cambridge Instrument Co. The percentage of CO_2 rose fairly rapidly to a value of about 11 per cent., thereafter remaining constant at that figure for a comparatively long interval. Unfortunately, the thermal conductivities of oxygen and nitrogen are so nearly identical that so far it has not been found possible to apply the method to the measurement of oxygen consumption.

Some early wireless apparatus was shown by the Science Museum. The exhibit included instruments used by Sir Oliver Lodge at a lecture to the Royal Institution in June, 1894, in experiments with Hertzian waves, on which occasion wireless signals were transmitted through walls a distance of some 20 yards; also part of the first tuned coupled circuit apparatus of Senatore Marconi.

The Director, Rothamsted Experimental Station, demonstrated two lines of research in connexion with *Bacillus radicicola*, the nodule organism infecting leguminous plants. The organism passes in the soil at certain periods into an active flagellated stage, and it was found that the appearance of this stage could be promoted by inoculating the soil with the organisms suspended in milk and that this effect was increased by the addition of phosphate. The application of these principles has resulted in increased nodule formation and a correspondingly increased crop yield. It was found, further, that the development of the nodules was very sensitive to the presence of boron in the growth medium. If this element were absent the nodule was either poorly developed or entirely lacking, and in the former case the organisms failed to fix atmospheric nitrogen in appreciable quantities and became parasitic on the plant cells.

Attention was directed by Dr. O. Rosenheim and Prof. J. C. Drummond to a colour reaction for vitamin A. The reaction consists essentially in the development

of a brilliant ultramarine colour when a dehydrating agent, such as arsenic chloride or trichloracetic acid, is added to an oil containing the vitamin. The colour is sufficiently permanent to permit of a colorimetric estimation of the relative amount of vitamin A present. The discovery that the intensity of the reaction runs parallel to the vitamin-A content of cod-liver oils and butter as tested by the usual method of biological assay brings the method at once into extreme prominence and utility. It is interesting to record that a colour reaction, though a different and transient one, is also given by the addition to cholesterol of any one of the dehydrating agents used in the detection and estimation of vitamin A, and that yet another colour is given by irradiated cholesterol. It will be remembered that vitamin A is found exclusively in the unsaponifiable fraction of cod-liver oil.

Dr. H. W. Dudley and Dr. Rosenheim showed some crystals of spermine phosphate. This substance, however, has been shown not to be specific to semen, but to be capable of isolation from almost all animal tissues. It has further been detected in yeast. Naturally a substance with such a wide distribution in animal tissues may well be suspected of performing some definite and important function. Its molecular formula has been shown to be $C_{10}H_{26}N_4$, but its structure has not yet been determined.

The results of some interesting tissue culture experiments were given by the Imperial Cancer Research Fund. It was demonstrated that fresh tissue—kidney in this instance—failed to grow until an extract of damaged tissue, preferably homologous, was added to the culture. Possibly an explanation of regeneration in the neighbourhood of damaged tissue may lie hidden in this experimental fact. No differentiation in structure, however, occurs until the growth is inoculated with a pure culture of fibroblasts, and then it soon becomes possible to discern cubule formation in the formerly homogeneous cellular mass. The dependence of differentiation of structure on the presence of an adequate amount of growing connective tissue was further shown in a convincing manner in the case of epithelial tissue.

An electrical stethoscope exhibited by the International Western Electric Company should prove of great value for diagnostic and teaching purposes. On the one hand, by making use of electrical filters, waves of certain frequencies can be excluded or retained at will, thus making it possible to concentrate on a particular element in the sound, and on the other, a means is presented by which a large number of persons, up to 600, can listen simultaneously to an individual patient.

In addition, many other demonstrations and exhibits of less obvious bearing on the medical sciences served to make the evening one of extreme interest and lasting instruction.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Accidents in Vienna.

FOR the past 15 years there has existed in our city a special accident ward, which is really simply a surgical clinic for accident cases. It is managed by both surgical clinics of the General Hospital (Prof. Eiselsberg and Prof. Hochenegg), and the clinics have now published a report of the work done in this ward since its inception. In the preface Prof. Eiselsberg declares that the "accident service" in Vienna has attained a degree of fitness which makes it a model for all other places of a similar position. At any hour of the day or night a group of surgeons and nurses is always prepared to deal with cases of injury brought to the hospital, mostly by the street ambulances. All the modern and most up-to-date appliances are in daily use: portable X ray outfits, apparatus for transfusion of blood, anæsthesia apparatus, and so forth. As regards the results obtained, it may be stated that within the period mentioned above 24 cases of injury of the heart have been operated upon, 16 stab-wound cases, and 8 gunshot-wound cases, of which 6 of the former were saved and 4 of the latter. In 168 cases laparotomy had to be performed on account of injuries to the abdomen. A remarkable lesson is taught by the figures pertaining to the accidents caused by the traffic. The increase of the city life, of the number of vehicles, the ever-increasing employment of inexperienced workers at machines in factories has more than trebled the number of injuries in ten years; whilst the deterioration of public morals, the disappearance of the sense of responsibility, the mental instability ascribed to the war, to alcohol, and to poverty has also contributed largely towards the increase of injuries. Alcohol especially is a potent danger. In 1913 only 20 cases due to liquor were brought to the ward; in 1924, in the first ten months, the number was over 100. Motor-cars have increased in ten years by 25 per cent. only in Vienna, but the accidents caused by them have gone up by 500 per cent.! This compares very unfavourably with the tramcars, by which means over 458 millions were transported in one year with only 87 accidents; and even this figure is hardly higher than ten years ago, with a much smaller number of passengers then. The effect of alcohol is easily discernible in the sudden rise of cases on Sunday nights and Saturdays, when the week's wages are dissolved in this dangerous liquid.

Injury to the Fœtus Caused by X Rays.

Prof. J. Zappert demonstrated recently, at a meeting of the Vienna Medical Society, a baby with peculiar features. The weight of the baby was under 2 kg. at birth and at 7 weeks it was 2½ kg., the body-length being 50 cm. At the age of 7 months it weighed only 4½ kg., was very quiet, and showed a decided lack of intelligence, marked microcephalic appearance and some degree of mongolism. The right eye was very malformed, the left small, but capable of seeing. This condition of mongoloid idiocy has been noted in three cases (observed by Abels, Aschenheim, and Zappert) where the mothers had been treated with X rays during their pregnancy. The mother of the demonstrated patient, a woman of 23 years, who had suffered since girlhood from dysmenorrhœa, was irradiated on Dec. 18th, 1923, for the first time, and again eight days later (receiving 6 units of Holzknecht). Four weeks later she was found to be pregnant, and the child was born July 15th, 1924. In the other cases recorded elsewhere, the symptoms of microphthalmia and microcephaly were also combined. Although cases are known where pregnant women have been exposed to X rays without any resulting injury to the fœtus, experiments on animals have shown that irradiation does cause sterility or "unviable" offspring. Artificial abortion in human beings could not be obtained, however, by these means. As regards the mechanism of the injury, it must be noted that the exposure to the X rays of the mother in Prof. Zappert's case took place just at the time when the anterior part of the encephalon and the ophthalmic (optic) part are formed. Furthermore, experiments conducted by American workers have shown that certain chromatin bodies are especially liable to injury by X rays, such as the eyes and extremities. In the discussion following the demonstration it was agreed that at present the medical profession was not prepared to employ X rays on the ovary or uterus where pregnancy was assumed. Small myomata can be dealt with otherwise, and severe hæmorrhages can be controlled by irradiation of the liver, spleen, or hypophysis.

The Cause of Death in Injuries of the Skull.

Deductions from 69 fatal injuries to the head, investigated very thoroughly from the clinical and

anatomical standpoint, were presented by Prof. Meixner to the Surgical Society of Vienna recently. He said that commotio cerebri played a very small part as the cause of death in these cases. In every case gross injuries of the brain substance or increased pressure by hæmorrhage was observed. In 12 per cent. of the cases only were contusions of the brain absent, but these contusions were not negligible conditions, as they were often ultimately responsible for the fatal issue. Even where death occurred within the first hour after injury commotio cerebri was not the real cause of death. Here the rapid loss of blood—sometimes the quantity was enormous—was chiefly responsible. Furthermore, in crushing injuries of the skull the destruction of the vital centres accounted for rapid death. But in over 50 per cent. of the fatal cases where death occurred more than an hour post trauma, and where a blunt instrument had inflicted the wound, the bruises to the cortex were the responsible factor. Protracted bleeding under the dura mater, in some instances also extending deeply into the brain substance, were the outcome of such injury, and in some cases inflammatory swelling of the brain followed. Hæmorrhage on the outside of the dura mater was much rarer and caused death more rapidly. The appearance of symptoms in hæmorrhage underneath the dura were very rapid, but death resulted much later. Changes and variations of symptoms were mostly due to multiple contusions. In a few cases only, where the decursus morbi was protracted, the immediate cause of death was not quite so clear; it seemed, he said, that here multiple changes were responsible. Serous meningitis, which was often suspected, had never been observed by Prof. Meixner in the post-mortem examination of such cases. He pointed out that contusion of the brain must not be confused with increased intracranial pressure. Contusion was an injury to the tissues, increased pressure a symptom, the contusion being the cause of the pressure. The expression "commotio" cerebri was generally used, whereas it should be "contusio" cerebri where protracted cranial conditions were meant. Fracture of the skull was generally accompanied by gross lesions, and the ultimate results in surviving cases should be regarded, he said, from the view not only of commotio but also of contusio cerebri.

The Biology of the Cancer Cell and Insulin.

Dr. Silberstein recently read a paper before the Gesellschaft der Aerzte, in which he discussed the problem of the biology of cancer. Warburg had already found, he stated, that cancer tissue produced 70–90 per cent. more lactic acid from dextrose than normal tissue. In collaboration with Dr. Revez and Dr. Freud the speaker had investigated the lactic-acid metabolism of cancerous animals. They did not find an increased output of lactic acid, perhaps because the excess was used up by the cells of the liver and by the muscles. (Prof. A. V. Hill's observations.) Animals in the pre-cancerous stage (subjected to painting with tar and injected with tumour tissue) had the same respiratory quotient as fasting animals. Feeding with carbohydrates did not affect this quotient in cancerous mice, but animals in the pre-cancerous stage were much more susceptible to insulin injections than healthy ones. Heated insulin was less active than in the cold state. After injection the pre-cancerous animals were hypersensitive to insulin for several days, whilst animals with fully-developed tumours could stand 30 to 50-fold normal doses of insulin, and the tumours exhibited a markedly slower rate of growth. The rate of growth increased when insulin was discontinued. If, soon after the injection of tumour masses, large doses of insulin were employed constantly, a large percentage of the animals remained free from cancer. Dr. Silberstein therefore urged clinicians to give insulin freely to the inoperable cancer cases, and to give a fair trial to this method, as the animal experiments gave such uniformly favourable results.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Dual Nature of Cardiac Automatism.

IN a thesis presented before the Academy of Medicine Dr. E. Donzelot criticised the conception of the single cardiac stimulus, transmitted from the auricles to the ventricles by conduction. This conception is based on two premises—first, the clinical evidence of a fixed relationship in the action of the auricles and the ventricles, and second, the experimental evidence which rests on the results of ligature, section, or compression of the auriculo-ventricular bundle, results which have further confirmed certain pathological observations. On the basis of several clinical observations, Dr. Donzelot holds that the cardiac cycle is governed by a double stimulus, auricular on the one hand and ventricular on the other. The auricular stimulus, which is apparently elaborated or centralised by the node of Keith and Flack, is of secondary importance only. The auricle is, effectually, only a blood reservoir whose periodic contractions are merely a security for the ventricle and not a necessity. The best proof of this lies in the finding that the function of the heart is adequate when the contraction of the auricles is absent or is seriously disturbed. The ventricular stimulus, elaborated or centralised by the node of Tawara, is, on the contrary, of prime importance. It is this stimulus which supplies, through the ventricular systole, the blood distribution throughout the body; any derangement of this stimulus is of importance and its absence is equivalent to a total cessation of the circulation. This view of a double cardiac stimulus modifies, by simplification, the general conception of arrythmias, and ought to open up a new line of research in ætiology and therapeusis of heart troubles.

Native Medical Service in French Colonial Africa.

French possessions in Africa cannot be made to yield of their best unless there is an adequate personnel to develop them. As far as medicine is concerned, the personnel is scanty and scattered, as was demonstrated to the Academy of Medicine recently by Prof. Emile Brumpt and Dr. Joyeux. The only method of improving the existing conditions, they held, was to develop the native medical service. Unfortunately, the number of doctors is negligible in comparison with the vast extent of French occidental and equatorial Africa. This number might be considerably augmented if the colony, in its own interests, were to offer to French doctors prospects in which adequate remuneration was made for a life work carried out far from la patrie, under difficult conditions. But it does not do so, for the French African colonies treat their doctors in very niggardly fashion, whereas neighbouring foreign colonies act much more generously towards their medical men. Young French doctors go willingly to Indo-China or to the Belgian Congo, but show little enthusiasm for occidental or equatorial Africa. The speakers said that more attention ought to be paid to this aspect of colonial development; the war and the present economic crisis had shown only too clearly the importance of medical service in the colonies.

How to Judge the Acoustics of a Hall.

At the Academy of Medicine Dr. Marage has been giving some practical advice on how to judge the acoustic properties of a hall, if these have not been explained beforehand to the singer or orator. The judgment is based on the following points: first in an empty hall, judged by the eye; a large hall, with a very high roof and side walls not furnished with boxes, and having somewhat concave background to the platform, is probably too resonant and will give echoes. A hall without galleries, with a low roof covered with a curtain, and in shape longer than it is broad, has probably very poor acoustic properties and the voice will carry badly. To judge by the ear:

A vowel sound is sustained in speaking or singing for about three seconds, and the performer can himself hear the resonance, if it lasts too long. When the hall is full of people, it must be remembered that the audience have a great absorptive power as regards sound, and resonance diminishes in proportion to the size of the audience. If, in speaking or singing, the performer can hear his own voice resonating slightly, then he may be assured that he is audible to all. If, in spite of efforts, no resonance is heard, then it is useless to force the voice, and the performer must address himself to the front rows of the auditorium. If one is aware of a strong resonance, the voice must be lowered to as deep a note as possible. If the attention of the audience flag—and the cause be not in the subject-matter of the performance—it must be remembered that the ear is more sensitive to high notes, and the performer should tune his voice to a higher pitch.

Public Health Services.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

THE following are some of the health statistics of a group of districts of varying local government status for 1924 :—

Name of district.	Mid-year population (R.G.).	Birth-rate.	Death-rates per 1000 of the population.				Death-rates per 1000 births.		
			All causes.	Tuberculosis.	Cancer.	Resp. diseases with influenza.	Neonatal mortality.	Infant mortality.	Maternal mort. from childbirth.
Reading C.B. ..	93,680	17·1	10·7	1·03	1·4	1·9	26	54	3·1
Bootle C.B. ..	83,130	23·4	11·6	1·40	0·9	2·7	34	99	5·1
Holland C.C. (Lincolnshire) }	87,400	20·7	11·7	0·98	1·7	1·8	—	65	2·7
Watford B. ..	48,628	17·7	9·8	0·82	1·3	1·9	30	55	5·9
Stafford B. ..	28,730	15·6	9·7	1·20	1·1	1·8	38	73	8·9
Runcorn R.D. ..	29,370	14·9	9·9	1·09	1·1	1·3	—	46	6·8
Chelmsford R.D.	25,710	17·8	11·7	0·80	1·3	1·9	—	50	2·2

C.B., County borough. C.C., County council. B., Borough. R.D., Rural district.

Reading.

Dr. H. J. Milligan reports that of the total number of persons who died nearly half had passed their sixty-fifth birthday. The rapid fall in tuberculosis mortality has not been maintained, and Dr. Milligan thinks post-war conditions, such as housing shortage, unemployment, and the general uncertainty and anxiety are responsible. The loan of shelters continues to be of great service. The Voluntary Care Association finds difficulty in securing employment for tuberculous persons; employers are prejudiced, and there is also the difficulty in fixing hours of work and adequate pay. The association found there was no opening for window-cleaning, brush-making, and chopping firewood, but a few patients were found satisfactory jobs as gardeners, motor drivers, delivering parcels, night-watching, and so on.

The Reading Medical Society is a limited company, conducted by the medical practitioners to meet the requirements of the dependants of insured persons by means of weekly subscriptions and caters for the medical requirements of 10,000 persons. The Reading Dental Society provides similarly for dental requirements. Dr. Milligan is convinced that the lessening number of new cases at the V.D. clinic represents a real diminution in the prevalence of venereal disease. The Dellwood Maternity Home admitted 239 patients. The accommodation has been found inadequate. A separate pavilion is to be provided for the nursing staff, and isolation wards for severe or septic cases. Owing to an outbreak of pemphigus neonatorum, the home had to be closed during January of the present year. The housing shortage makes this home a necessity. Thus of the 239 cases admitted, 62 came from a one-room and 93 from a two-room home. The husbands of 43 applicants were unemployed. The average fee paid was £1 9*s.* per week, and the fee was remitted in 21 cases. The antenatal clinic was attended by 266 new cases, and of these 208 were awaiting admission to Dellwood. Housing conditions remain very unsatisfactory. "There is much overcrowding, and dwellings in a ruinous condition have to remain in occupation for lack of alternative accommodation."

The school report shows that medical inspection has now reached a stable form and that the numbers inspected annually slightly exceed one-third of the average attendance. Although there is a gradual improvement year by year, certain defects, such as errors of vision and enlarged tonsils and adenoids, occur in much the same proportion as formerly. Ionisation of ear discharges continues to give good results, and there was no recurrence of discharge in cases treated in 1923. Parents are becoming more alive to the need for greater care of the teeth of their children, but it is noted that there is still a considerable prejudice against having teeth filled and also ignorance of the fact that the six-year old molars are permanent teeth. Over 20 per cent. of the children examined at the routine medical inspections were classed as "under-nourished," but the increased proportion is only apparent, being due to the adoption of a definite standard which gets rid of the personal predilection of the examiners. All children 7 per cent. or more under the average weight for their height are considered "under-nourished," and as time goes on this standard will provide a reliable basis for comparison. An examination of boys and girls of 12 years of age for enlarged thyroid was carried out during the year. Only those children whose thyroids could be noticed by inspection without measurement or palpation were counted. Nine out of 413 boys and 34 out of 551 girls had some enlargement. The majority of the cases seen were very slight. The school medical service of Reading is very well equipped for dealing with all kinds of special cases and exceptional children.

Boolle.

Dr. F. T. H. Wood says housing is still the most pressing need. The hoped-for completion of a large number of houses did not materialise, and the population increased by 1500. Only three houses, instead of 100, were completed. The council houses erected during the last five years numbered 26, 76, 200, 0, and 3 respectively. It is hoped to make better progress during 1925. Dr. Wood cites instances of urgent cases coming to the knowledge of his department. Attention has been given to the cleanliness of the milk, and the results of the examination of the local and imported milks are anything but satisfactory. In four cases "the milk can be considered to be grossly contaminated." Out of 22 samples examined for tubercle, four were found to be infected. The regulations for milk-shops are to be enforced more strictly, with a view to restricting the sale of milk to properly equipped dairies. Although 14 of the 118 samples of milk were reported by the public analyst to be adulterated, the average amount of fat in the 118 samples was 3·71 per cent., and of non-fatty solids 8·76 per cent., to be compared with the presumptive standard of 3 per cent. and 8·5 per cent. fixed for genuine milk.

A severe type of scarlet fever prevailed in Bootle during 1924 with a case-fatality of 2·2 per cent. The Schick test was used in the case of 158 scarlet fever admissions, and indicated the diminishing susceptibility at the later age-periods. Thus 26 out 53 gave positive results under 5 years of age, 23 out

of 61 at the 5-10 age-period, 7 out of 35 at 10-15 years, none out of 6 at 15-20 years, and none out of 3 at ages over 20. New probationer nurses are tested after engagement. Since this practice was adopted, four out of 14 have given positive reactions and have been treated with toxin-antitoxin.

The maternity home has not been fully used, and the standard fee of 6 guineas for a fortnight's nursing and maintenance has been reduced to 4 guineas since March, 1925. During last year 114 cases were admitted, and it was estimated that 44 additional cases could have been accommodated at an added cost of £55 only, for food, laundry, &c. For the last financial year the gross cost was £1497, and the cost to the rates (after deducting patients' contributions, £465, and Exchequer grant) was £516. Dr. Wood draws attention to the high infant mortality from respiratory disease and the need for health visitors concentrating on clothing and ventilation advice. He stresses the need for an increase of staff. The Council in January, 1924, decided to appoint an additional health visitor, in accordance with the wish of the Ministry, but subsequently rescinded their decision. The present staff is unable to give adequate attention to the "toddlers." At the present time a weekly infant consultation is held at each of the three centres maintained by the Bootle Health Society. As the average attendances during the fourth quarter of 1924 were 115, 117, and 107 respectively, the need for an increase in the number of consultation days is obvious.

Lincolnshire: Holland.

Dr. H. C. Jennings reports that an arrangement came into operation in April, 1924, by which county patients may use the V.D. clinics at Peterborough and Lincoln, and that over £80 was spent in paying the railway fares of such patients. In November a tuberculosis dispensary was opened at Spalding and this will meet a long-felt want in the southern portion of the county. Hitherto the county council have established no maternity and child welfare centres, but arrangements have been made for opening a centre at Long Sutton and for utilising centres at Spalding and Boston. Dr. Jennings draws attention to the fact that the infant mortality is higher in the rural than in the urban districts, and attributes this to the rural mothers working on the land, and leaving their babies "in charge of some old woman, who is paid a small sum of money for her trouble." A table shows that cancer has always caused a higher death-rate in the low-lying parts of Lincolnshire than in other parts of England and Wales, and the report contains a suggested leaflet for issue to the public. There are now no "bona-fide" midwives practising in the county, the last having retired in 1924; but there are several women practising midwifery illegally and owing to the wording of the Act it has hitherto not been possible to stop them. The greater part of the county area is without a public water-supply, and dependent on rain-water tanks, shallow wells, or surface water from rivers. The whole question will be reviewed in the report for 1925.

Watford.

Dr. Wm. J. Cox refers to the shortage of working-class houses and the consequent overcrowding. The present scheme for 250 new houses will be a "great help," but 1000 houses are needed to meet present difficulties. Four cases of encephalitis lethargica were notified, two cases being in one family. There was one death. In answer to an inquiry from the Ministry, particulars as to scarlet fever since 1892 have been got out. Dr. Cox thinks hospital isolation has diminished the prevalence and may have helped to develop a milder strain of the disease. Among the school-children goitre was found to be negligible in prevalence among boys, but about 5 per cent. of the girls showed obvious signs. None of the cases was sufficiently marked to cause any anxiety.

Stafford.

Dr. J. T. MacNab hopes, that, now the private builder, encouraged by subsidies, is again coming forward, fresh efforts will be made to provide houses for the poorer workers. A second health visitor has been appointed and more commodious premises secured for the "centre."

The new sewage disposal works are about to be put in hand and will bring about a much-needed improvement. Thirteen cases of encephalitis lethargica were notified, with two deaths at ages 70 and 43. The first two cases occurred in March and the last in December. Only two or three of the surviving 11 are free from after-effects and in two at least there is mental impairment.

Runcorn Rural District.

Dr. J. S. Manson reports a great increase in house building, but he is doubtful as to whether the type being built will afford accommodation for the lower-paid wage-earner. A report on the prevalence of scarlet fever during the last 32 years has been made to the Ministry. The main conclusion was that the disease had become milder, but that there was very little diminution in its incidence. Four out of 34 samples of milk examined for tubercle were found to be infected. An effort is being made to interest the producers in the production of clean milk. Runcorn is within the Manchester regional town-planning area, and sent representatives to an area conference on smoke abatement. A committee has been set up to formulate practical suggestions for submission to another conference later on.

Chelmsford Rural District.

Dr. John F. Macdonald says the shortage of house accommodation is still acute throughout the district. During the year the rural council for the first time appointed a veterinary surgeon to carry out a systematic inspection of all the dairy herds in the district. The report of the veterinary surgeon, Mr. J. Bishop Young, is given in full. The cows inspected numbered 3939 in 166 herds, and Dr. Macdonald tells us that this single inspection resulted in the elimination of 33 dairy cows from the milking herds. Mr. Young's report contains much advice which should be valuable to the dairy-farmers of the district. For example, he emphasises the importance of milk-recording, and he cannot understand why, in the interests of clean milk production, manure is not removed at once instead of being piled close to the cowshed.

INFECTIOUS DISEASE IN ENGLAND AND WALES DURING THE WEEK ENDED MAY 9TH, 1925.

Notifications.—The following cases of infectious disease were notified during the week, namely:—Small-pox, 162; scarlet fever, 1691; diphtheria, 855; enteric fever, 60; pneumonia, 1027; puerperal fever, 47; cerebro-spinal fever, 13; acute poliomyelitis, 6; encephalitis lethargica, 80; dysentery, 4; ophthalmia neonatorum, 103. There were no cases of cholera, plague, or typhus fever notified during the week. The number of small-pox cases showed a decrease of 14 from the number for the preceding week. Five cases were notified from the County of London (Bethnal Green 4, Lambeth 1); 60 from Derbyshire (Derby C.B. 43, Alvaston and Boulton 1, Chesterfield 4, Clay Cross 2, Chesterfield R.D. 10); 11 from the county of Durham (Brandon and Byshottles 2, Hartlepool 1, Leadgate 2, Whickham 3, Chester-le-Street R.D. 1, Easington R.D. 1, Lanchester R.D. 1); 1 from Lancashire (Audenshaw); 2 from Leicestershire (Leicester C.B. 1, Hinckley R.D. 1); 1 from Lincolnshire, parts of Lindsey (Gainsborough); 8 from Northamptonshire (Kettering); 25 from Northumberland (Newcastle C.B. 3, Ashington 7, Bedlingstonshire 11, Newburn 1, Prudhoe 3); 13 from Notts (Nottingham C.B. 1, Hucknall 2, Kirkby-in-Ashfield 1, Mansfield 1, Mansfield Woodhouse 8); 6 from Warwickshire (Coventry C.B. 3, Nuneaton 3); 22 from Yorks, North Riding (Middlesbrough C.B.); and 8 from Yorks, West Riding (Rotherham C.B. 3, Adwick-le-Street 4, Maltby 1).

Deaths.—One death from small-pox belonging to Chesterfield was registered during the week. In the aggregate of great towns, including London, there were 2 deaths from

enteric fever, 86 from measles, 11 from scarlet fever, 118 from whooping-cough, 31 from diphtheria, and 68 from influenza, as compared with 100, 139, 162, and 221 in the four preceding weeks. In London itself the deaths from influenza numbered 12, from whooping-cough 27, and from diphtheria 13.

THE DEATH REGISTERED AS FROM SMALL-POX AT CHESTERFIELD.

One death from small-pox belonging to Chesterfield was registered during the week ended May 9th. Dr. R. P. Garrow, medical officer of health for Chesterfield, informs us that the death so registered was that of a woman of 60 years in the last stages of chronic nephritis, with albuminuria, ascites, watery bronchial catarrh, and feeble action of the heart. He states that the attack of small-pox may or may not have accelerated her death. The attack was of the ordinary mild form prevalent in the district.

THE BATEMAN APPEAL.

As already explained in THE LANCET, it has been felt that material assistance ought to be offered to Dr. Bateman to meet the legal expenses of his recent successful appeal against conviction and to make good the deficiency in his professional income. Accordingly, the Bateman Fund has been opened and lists of contributions have appeared in recent issues. We have received additional contributions as follows:—

	£	s.	d.
Already received and acknowledged ..	446	18	6
Dr. J. Fawcett	2	2	0
Dr. F. Savery	2	0	0
"Anonymous"	2	0	0
Dr. J. B. Hurry	1	1	0
Dr. J. P. Westrup	0	10	6
"Abroad"	0	10	0
	455	2	0

Remittances should be forwarded to the Manager of THE LANCET, 423, Strand, W.C. 2, and made payable to the "Bateman Fund Account."

The Services.

ROYAL NAVAL VOLUNTEER RESERVE.

Surg. Cdr. H. L. Murray has been awarded the Royal Naval Volunteer Reserve Officers' Decoration.

ROYAL ARMY MEDICAL CORPS.

Maj.-Gen. W. H. S. Nickerson, late R.A.M.C., is appointed Hon. Surg. to the King, vice Maj.-Gen. T. W. Gibbard, late R.A.M.C. (ret.).

Capt. J. H. C. Walker is granted the temp. rank of Maj. whilst empld. as a Dep. Asst. Dir. of Pathology.

Capt. J. J. Molyneaux, half pay list, late R.A.M.C., retires on account of ill-health.

Lt. J. L. Howells relinquishes the rank of Lt. on enlistment into the Supplementary Res.

Lt. (on prob.) T. J. M. Dodd is secd. under the provisions of Art. 197, Royal Warrant for Pay and Promotion.

RESERVE OF OFFICERS.

Maj.-Gen. E. M. Pilcher, late R.A.M.C., having attained the age-limit of liability to recall, ceases to belong to the Res. of Off.

TERRITORIAL ARMY.

Maj. (Prov.) C. Douglas is confirmed in his rank.

Capt. W. S. Martin, R.A.M.C., to be Divisional Adjt. 47th (2nd Lond.) Div. and School of Instruction, vice Maj. W. P. Croker, R.A.M.C.

TERRITORIAL ARMY RESERVE OF OFFICERS.

Lt.-Col. D. G. Rice-Oxley, from Active List, to be Lt.-Col.

ROYAL AIR FORCE.

Flight Lt. (Hon. Squadron Leader) W. R. Kemp relinquishes his temporary commission on ceasing to be employed and is permitted to retain the rank of Flight Lt.

INDIAN MEDICAL SERVICE.

The King has approved the retirement of Lt.-Col. A. T. Gage.

Correspondence.

"Audi alteram partem."

THE BATEMAN APPEAL.

To the Editor of THE LANCET.

SIR,—Generous donors may send larger sums. If, however, the majority of registered medical men each sent a small sum (such as the P.O. for 10s. which I now enclose) it would assure Dr. Bateman of our widespread sympathy, and result in a sufficiency to meet the needs.

I am, Sir, yours faithfully,

Mussoorie, April 29th, 1925. ABROAD.

POST-GRADUATE TEACHING IN MIDWIFERY.

To the Editor of THE LANCET.

SIR,—As obstetrics and post-graduate work are both under discussion at present, it appears to me that the experiences of a post-graduate may be of service to those responsible for the organisation of such work. After having practised for a number of years in India I recently returned to this country with the object of taking up research work in connexion with maternal morbidity in India, and with this end in view I was anxious to obtain the best post-graduate course in obstetrics available.

I went first to the headquarters of a post-graduate association in London, and when I had explained what I wanted the clerk said: "If it is obstetrics you wish, I am sorry we can do nothing for you. It would not be worth your while to pay a fee." I then looked round the London hospitals. Some of the obstetricians connected with them were extremely kind and invited me to attend their clinics, which I did, but it was on the understanding, of course, that the students had the first right to the clinical material, and a casual visitor felt a delicacy about drawing the attention of the staff to subjects of interest which would be of little importance to students preparing for examination.

I then looked beyond London and heard of a post-graduate course in obstetrics in Edinburgh, but this only took place during the summer vacation, a time not suitable for me. I knew that post-graduates were catered for in Dublin, and therefore I entered as a post-graduate at the Rotunda Hospital for a month.

The Rotunda Hospital has a great deal to fit it for a first-class post-graduate school. It attends, in its extern and intern departments, over 4000 labour cases annually. It has ample accommodation for students and an establishment which enables them to board at reasonable rates with a fair degree of comfort. As regards obstetrics, it has deservedly a world-wide reputation. The applications from students and post-graduates are very numerous. It was, therefore, disappointing to find that more attention was not given to teaching. Let me briefly describe the opportunities offered. Students and post-graduates, 40 to 50 in number, were grouped together, and there were in addition 20 to 30 probationer nurses attending lectures and deliveries. Three times a week at 10 A.M. the Master visited the cases in the waiting ward and then delivered a lecture on midwifery. These lectures were most interesting, but no effort was made to make them useful to post-graduates. The whole subject of obstetrics was gone through in rotation, and although the matter was, of course, entirely up-to-date, it might quite happen that the post-graduate did not, during a month, hear anything he had not known five or ten years before; that is to say, none of the subjects on which recent work has been done might happen to have their turn. A short clinic on gynæcological out-patients followed, more useful to the student than to the post-graduate, and the work finished at 12 or shortly after. On two days a week operations might be attended at 10 A.M. On these days the post-graduate might, if he liked,

attend a half-hour lecture on elementary midwifery given by one of the assistant masters. This finished the work. There were no visits to the wards (other than the waiting room), and no opportunity to follow up the cases seen in the labour room and theatre. True, it was stated in the rules that the students might visit the wards, but those who did so frequently found they could not be admitted owing to the nurses' work or other matters. A few enthusiastic spirits visited the waiting ward each evening to see the new cases. There were eight beds in the ward, seldom all occupied, and it was fortunate for the patients that the bulk of the students did not attend. Little antenatal work appeared to be done, and that the students could not attend as it was carried on at the same hour as the Master's lecture.

There was no library other than half-a-dozen antiquated volumes, no periodicals available, no reading room where silence was observed, no notices of clinics or lectures elsewhere which the post-graduates might attend. The medical students were kept fairly busy attending and visiting cases in the district, and as a rule only remained two or three weeks, but the post-graduates (who took no normal cases) often remained as long as six months, which period was required for admission to the L.M. examination. It seemed to be the common opinion that one month's careful reading of the Master's book was sufficient preparation for this examination, which was purely oral, and that the remaining five months could be spent in amusement. The atmosphere of the common mess-room was not conducive to study.

Deliveries, of course, took place at any time. But owing to the large numbers of students, only a few could really see what was being done. All except the most important obstetric operations were done by one of the assistant masters. Most of the post-graduates were profoundly disappointed at not getting any operative experience even after months of residence. There were two types of post-graduates, the first, and by far the larger, being newly qualified practitioners especially anxious to gain practical knowledge, the second being older practitioners, frequently from abroad, who wished to learn the latest obstetric methods. The attitude of the hospital authorities seemed to be that post-graduates were tolerated and were left to pick up what information they could.

I feel I owe an apology to that distinguished institution, whose work I respect and admire, for these criticisms, but it appears to me that they illustrate the principle that post-graduates cannot be taught with students, and that a different organisation altogether is required, at least for those older practitioners who do not need experience but who wish to learn the latest methods in the shortest possible time and are willing to pay to do so. If such a course could be arranged with the coöperation of several of the lying-in hospitals in London, it need interfere little with the teaching of students. It would be necessary to arrange for lectures, visits to lying-in wards (which should include not only clinical instruction, but instruction in nursing organisation and newer hospital construction), attendances at antenatal clinics, demonstrations on newer methods of examination (including bacteriological, X rays, &c.), visits to special institutions in connexion with infant welfare, venereal disease, &c., and attendance at selected operations. It would be essential that the teachers should all be experts in their own subjects.

I am, Sir, yours faithfully,

May 8th, 1925. MARGARET I. BALFOUR.

THE ALLEVIATION OF CHRONIC PROGRESSIVE DEAFNESS.

To the Editor of THE LANCET.

SIR,—We have read with interest and pleasure Mr. G. C. Cathcart's paper on the use of the Zund-Burguet electrophonoide in chronic progressive deafness. Indeed, the pleasure is enhanced by the fact that, in spite of the discouraging reports of other otologists, we had determined to investigate the value of the Zund-Burguet apparatus for ourselves. Our results have so far justified us, and they appear to be quite equal to those of Mr. Cathcart, although we have not yet used the machine sufficiently long to enable us to speak decidedly as to permanence or otherwise of the improvement effected. We agree with Mr. Cathcart that tinnitus is the first symptom to yield to the method, improvement of hearing occurring later. In one case of "hysterical" deafness the hearing became worse; this appears to us to be strong evidence against any suggestion that the treatment acts by any "psychic effect." We attach great importance to the concurrent use of a vibrator, to which we are inclined to attribute the improvement in general health which we have, in common with Mr. Cathcart, noted in nearly every case.

We are, Sir, yours faithfully,

MACLEOD YEARSLEY, F.R.C.S.
CHARLES BENEY, M.B. Camb., M.R.C.S.

Wimpole-street, W., May 12th, 1925.

SECONDARY SARCOMA OF THE PANCREAS.

To the Editor of THE LANCET.

SIR,—In your issue of May 9th Dr. James Crooks records a case with the above description. There are many other such cases scattered in the columns of medical journals and Proceedings of societies. Some of these, perhaps half the total number, are described as sarcomas; the other half are to be found under such titles as chloroma or leukæmia. Where the former title is used, the original site of the sarcoma seems to be arrived at by a process closely analogous to guess-work, and in the case which you now record there is, alas, more than a little evidence of this same process.

Why should the ovaries be picked upon as the primary site of the disease? The disposition of the secondary growths, so-called, in such regions as the orbits hardly suggests origin in the ovary any more strongly than origin in the pancreas or thymus. If it be held that the secondary growths were disseminated by the blood-stream, we have still no particular reason to suspect the ovaries. Perhaps we may be told what clinical, anatomical, or pathological feature of this case justified the conclusion that the primary growth was in the ovaries.

Putting aside for the moment the question of sarcoma, one cannot help noting that there are many features in this case which suggest leukæmia as a more likely diagnosis. The blood condition is not typical of what the text-books used to denominate leukæmia, but it is much less typical of anything like sarcoma, and can be many times paralleled from the records of cases in which the blood was at some other stage frankly leukæmic.

There is another feature which might have aroused attention, and this is recorded in the following form, "Pressure over the shafts of the femora caused pain." One assumes that this feature was rather striking, or it would not have earned mention. What was it due to? One is accustomed to find it recorded in cases of leukæmia and supposes (rather vaguely) that hyperactivity of the bone-marrow and absorption of bone are to blame. But one may doubt if bilateral tenderness has ever before been recorded in a case of primary sarcoma of the ovaries. Another bilateral feature is afforded by the growths in the orbits. There is no evidence to tell us whether these originated in the periosteum or, as is more likely perhaps, in the connective tissues of the lacrymal glands, but a reference to the literature of Mickulicz's disease would doubtless show that this feature was more frequent in leukæmia than in sarcoma of the ovaries.

I admit that the report on the microscopy of the liver troubles me. There is so usually "round-celled infiltration" in leukæmia that its absence is curious. Perhaps a further search of the sections might reveal this, or perhaps the only section taken happened to be in a spot free from such change. However that may be, one may perhaps plead with authors who

may contemplate the publication of cases of sarcoma with curious blood pictures that they will relate one to the other in some coherent manner.

I am, Sir, yours faithfully,

Sevenoaks, Kent, May 13th, 1925. GORDON WARD.

MR. GREIFFENHAGEN'S PORTRAIT OF SIR DONALD MACALISTER IN THE ROYAL ACADEMY.

To the Editor of THE LANCET.

SIR,—The reference to this portrait made in THE LANCET of May 9th was not quite accurate, but I fear that the correction made this week confounds the confusion. The portrait now hanging in Burlington House is that presented to Lady MacAlister, and is taken from the one painted by Mr. Greiffenhagen for the General Medical Council.

I am, Sir, yours faithfully,

May 19th, 1925. DONALD MACALISTER.

CLEAN MILK IN HOSPITALS.

To the Editor of THE LANCET.

SIR,—On p. 1064 of your issue of May 16th you quote Dr. Chalmers Watson as having ascertained that practically none of the larger hospitals are using Grade A tuberculin-tested milk at the present time. I would like to point out that we have been using Grade A tuberculin-tested milk entirely since May, 1923, for both the isolation hospital and sanatorium in Leicester, as well as the staff resident here. We deal with infectious diseases and all forms of tuberculosis, both pulmonary and surgical, at this institution. The number of beds for patients here is 340, and the number of our resident nursing staff is 88, a combined total of 428. Even our cases of small-pox get Grade A tuberculin-tested milk! Our average daily consumption of milk is 50 gallons. The milk is bacteriologically and qualitatively examined by us, about once a week in summer and twice a month in the winter, in order to ascertain if it is up to standard. During the past two years that we have taken this milk we have been very satisfied with it, and I wonder, like Dr. Chalmers Watson, that more institutions, and especially local authorities, do not go in for it. I do not know if this institution was the first to use Grade A tuberculin-tested, but I think it certainly was one of them, if not the first to do so.

I am, Sir, yours faithfully,

F. A. E. SILCOCK, M.B., D.P.H.,
Medical Superintendent, Isolation Hospital
May 16th, 1925. and Sanatorium, Leicester.

WOMEN'S WAR MEMORIAL IN YORK MINSTER.

To the Editor of THE LANCET.

SIR,—The Five Sisters Window in York Minster, which has been restored by women of the Empire in memory of women who gave their lives in the war, is to be unveiled on June 24th at 3 o'clock in the afternoon by the Duchess of York. Also an oak screen has been placed in the Minster with the names of the women to be commemorated. There are several women doctors on the roll of honour and it is very desirable that as many of their colleagues as possible should pay tribute to their memory on this occasion, whether they did war work or not.

As all representatives of war workers are to wear uniform it is requested that medical women who are present shall wear academic dress. All who have decorations should wear them. During the time of the ceremony at the Minster, memorial services are to be held throughout the Empire—e.g., in Australia, Canada, New Zealand. The railway companies are to issue special terms—i.e., return fare at one and a third the usual single fare, or for parties of 12, return fare at the price of the usual single fare.

I have been asked by the promoters of the Memorial to organise the medical deputation, and as it is impossible to get into touch with all by letter, I am writing to ask if you would kindly make the matter known. Applications to be present should be sent to the Hon. Secretaries, Women's War Memorial, Assembly Rooms, York, as early as possible.

I am, Sir, yours faithfully,

York, May 16th, 1925. LOUISE FRASER, M.D. Lond.

Obituary.

HOWARD HENRY TOOTH, C.B., C.M.G., M.D. CAMB., F.R.C.P. LOND.,

CONSULTING PHYSICIAN TO ST. BARTHOLOMEW'S HOSPITAL, THE NATIONAL HOSPITAL FOR PARALYSED AND EPILEPTIC, AND THE METROPOLITAN HOSPITAL.

Dr. Howard Henry Tooth, who died on May 13th at Hadleigh, Suffolk, at the age of 69, was well known, both as a physician with a bent towards neurology, and as an administrator. Born in 1856 at Brighton, he was educated at Rugby and entered St. John's College, Cambridge, in 1874. Six years later he graduated in medicine from St. Bartholomew's Hospital, to which he then became casualty physician. Later he was, in succession, demonstrator in physiology, medical tutor, and demonstrator of morbid anatomy; in 1897 he was appointed assistant physician, becoming in due course full physician in 1906 until 1921, when he retired on attaining the age-limit. For many years he lectured at the hospital on diseases of the nervous system, and at the weekly "medical consultations" his opinion on all obscure nervous cases always carried weight. Becoming a Fellow of the Royal College of Physicians of London in 1888, he gave the Goulstonian lectures in the following year. In these he dealt with secondary degenerations of the spinal cord, basing his conclusions on observations made at the National Hospital for the Paralysed and Epileptic, where he was at that time assistant physician. The lectures were noteworthy for the remarkable knowledge they displayed of the minuter anatomy and physiology of the central nervous system. Dr. Tooth became Councillor of the College from 1906 to 1908 and was a Censor in 1913–14. He also examined in medicine at Cambridge and Durham universities. His presidential address at the Neurological Section of the Royal Society of Medicine in 1912 was concerned with intracranial tumours, of which he had then collected 500 examples, his experience leading him to take a very cautious view of operative intervention. This was a valuable research whose lessons remain sound to-day. It was an authoritative communication on a difficult subject; it was the outcome of a characteristically close investigation of all the available records, and represented two years of close work.

When the South African war broke out Tooth offered his services and was appointed physician to the Portland Hospital, where his work gained him the C.M.G. Before that he had served on a committee for the reorganisation of the Army Medical Service. On returning from South Africa he maintained his interest in the University of London O.T.C. and took an active part in the organisation of the London hospitals on a territorial basis. Early in the Great War he was placed in command of the 1st London General Hospital at Camberwell, of which he became the historian, afterwards going overseas as consulting physician with the rank of colonel and doing good work both at Malta and at the Italian front. He was three times mentioned in despatches and in 1918 was awarded the C.B. The University of Malta conferred upon him the M.D. hon. caus. Tooth was also a good friend to the rank and file of the R.A.M.C., and for several years before his death was chairman of the Army and Navy Male Nurses Association to provide opportunities for civilian nursing to members of the Corps after leaving the Service.

Dr. Tooth was twice married: in 1881 to Mary Beatrice, daughter of the late Edward Price, by whom he had a daughter; and in 1907 to Helen Katherine, daughter of the Rev. Charles Chilver, of Midhurst, by whom he had a daughter and two sons, one of whom will follow his father's profession. Three months ago Dr. Tooth had a cerebral hæmorrhage while driving his car and did not recover the use of his limbs, although his mind remained clear to the last. His death is deeply regretted by all with whom he had come into relation, and sympathy goes out to his widow and family.

Sir ANTHONY BOWLBY writes: "The characteristic qualities of Howard Tooth's work were the extraordinary patience and thoroughness with which he investigated all his cases and the sympathy and desire to help which were always in evidence. It was these qualities which made him so successful both as a general physician and as a consultant in nervous disease. At St. Bartholomew's Hospital he was an ideal colleague and one who always kept in mind what was best for the hospital and school. Twenty or more years ago, when the hospital entered upon its career of expansion, it was Tooth who acted as secretary to the Medical Council and served on every one of the various subcommittees and in numberless consultations with the hospital governors. As a teacher in the medical school he was as careful and conscientious as in everything that he did. He loved to be with young people and his pupils quickly realised that he was a lenient critic of their clinical efforts and their guide and friend in the out-patient room or the medical ward.

"A very important part of Tooth's life work was his association with the Army, for the beginning of which I own myself mainly responsible. When in October, 1899, I was asked to take charge of the Portland Hospital, I invited Tooth to come with me. His services were in constant demand by the Army Medical Department during the campaign, when for a long time he was the only consulting physician in South Africa. He thoroughly enjoyed the open-air life and the constant sunshine of the veld, and proved *persona grata* to the personnel of the R.A.M.C.

"I knew Tooth from his arrival as a student at the hospital, and while he made many friends I never knew him make a real enemy. For many years he was an enthusiastic bicyclist and on various holidays rode from London to the North of Scotland and back. He was also a keen fisherman. At home, when he was not otherwise busied, he would be found in his carpenter's shop, for he was a most skilful worker both in wood and metal, and I always felt that with such excellent hands he ought to have been a surgeon. He continued to lead an active life until past middle age, when he became subject to abdominal troubles, although he went successfully through two operations.

"After leaving London for the country, he accepted an appointment at a clinic for nervous diseases under the Pensions Ministry, and took the keenest interest in this work until shortly before his death. The fact was that he was never quite happy unless he was occupied, and from first to last his life was a very busy and a very useful one."

CECIL CHRISTOPHERSON, M.R.C.S. ENG.

THE death occurred in a nursing home at Bexhill, on May 11th, of Dr. Cecil Christopherson, who was one of the best-known practitioners in Hastings. He was born at Blackheath in 1862, and was educated at Marlborough College. He studied medicine at St. Bartholomew's Hospital, and qualified L.S.A. in 1885, obtaining the M.R.C.S. Eng. and the L.R.C.P. Lond. in the following year. Following an appointment at the North-West London Hospital, Dr. Christopherson went into general practice in Hastings. In 1893 he was appointed assistant house surgeon at the Royal East Sussex Hospital, and served for 30 years on the staff, until ill-health forced him to retire in the winter of 1923, when he became consultant surgeon. On his retirement the governors presented him with a handsome testimonial, the monetary part of which he returned as a donation to the hospital. He was one of the originators and founders of the Hospital Benevolent Fund for East Sussex. During the war he was on the medical staff of Netley Hospital. He was at one time President of the East Sussex Medico-Chirurgical Society, and in 1915 was placed on the Commission of the Peace for the borough of Hastings. He was a staunch Churchman and a Freemason. He leaves a widow and two sons.

Medical News.

ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND.—As the result of the Final Examination in Medicine, Surgery, and Midwifery, held from April 14th to May 9th, the following candidates were approved in the under-mentioned subjects, but are not eligible for diplomas:—

Medicine.—J. S. Alman, Berlin; A. A. Anderson, Western Univ., Canada, and London; S. A. Antoun, Birmingham; L. Appell, Charing Cross; E. Bacon, St. Bart.'s; W. Baker, Leeds; C. M. Barker, Univ. Coll.; Jane G. Bevan, Westminster; S. S. Bhatnagar, Middlesex; C. A. Birch, Liverpool; H. M. Birch, Adelaide and London; F. T. Birkinshaw, Univ. Coll.; V. H. Brink, London; Theodora Brookes and Olive K. Burnett, Royal Free; Isabella M. G. Butler, Univ. Coll.; F. Carroll, St. Mary's; R. Cohen, Leeds; S. M. Coleman, St. Bart.'s; G. W. Curtis, Birmingham; H. G. Davies, Guy's; Hilda C. Dean, Charing Cross; G. Dietrich, St. Bart.'s; Dorothy Durance, Royal Free; W. G. P. Dyson, Manchester; R. G. Eastwood, Leeds; A. K. H. El Shurbagi, St. Thomas's; H. E. Filmer, Guy's; J. W. Fisher, St. Mary's; L. O. F. Fysh, London; J. Gabe, Westminster; E. H. Glynn, Liverpool; T. R. Goddard, Univ. Coll.; J. Gore, Birmingham; M. Gottfried, St. Mary's; M. J. Harker, St. Bart.'s; J. W. Hart, Univ. Coll.; Dorothy G. Hervey, Birmingham; A. B. Hewlett, King's Coll.; C. H. Highfield, Guy's; B. L. Hodge, St. Bart.'s; D. S. Jackson, St. Mary's; Morfydd R. Jones, Royal Free; A. K. A. Khalik, Cairo; O. F. A. Krause, Guy's; M. E. Lampard, King's Coll.; E. D. Lawrence, St. George's; Anne T. Leigh, Manchester; W. S. Macgowan, Middlesex; W. K. McKinstry, St. Bart.'s; Alice M. C. Macpherson, Royal Free; R. Marnham, St. George's; K. V. Mead, St. Thomas's; H. P. F. Modder, St. George's; W. S. Morgan, St. Bart.'s; Doris Nicklin, Birmingham; G. F. Oakden, St. Thomas's; A. B. Osbourne, St. Mary's; M. E. J. Packer, Bristol; J. D. L. Perera, Ceylon and London; G. L. S. Plumbly, Univ. Coll.; Nellie L. Pyman, Charing Cross; J. Raisman, Leeds; J. L. Reeve and J. B. W. Roberton, St. Bart.'s; N. L. Russell, St. George's; A. Sebba, London; H. Simmonds, St. Bart.'s; J. H. Simmons, King's Coll.; L. G. Smith, St. Bart.'s; Nettie H. Stein, St. Mary's; A. L. Stephen, Univ. Coll.; T. W. Stephens, St. Thomas's; A. C. Taylor, Guy's; G. F. Taylor, King's Coll.; Constance P. Thomas, Cardiff; F. T. Thorpe, Birmingham; Beatrice E. Turner, Royal Free; W. Twort, Univ. Coll.; Florence M. Wallen, Cardiff; Kathleen M. Ward, Liverpool; P. Weiner, King's Coll.; H. J. Williams, Birmingham; W. B. Williams, Cardiff; J. H. Willis, London; and A. T. Worthington, St. Bart.'s.

Surgery.—D. A. Abernethy, St. Bart.'s; C. P. Allen, Liverpool; C. B. Andreae, Guy's; J. R. Armstrong, St. Bart.'s; H. K. Ashworth, Manchester; E. Bacon, St. Bart.'s; C. V. N. Baldry, Sydney; D. E. Barton, St. Mary's; J. M. Bassett, Edinburgh; G. F. G. Batchelor, St. Andrews; J. R. Beal, Manchester; C. E. Beare, Middlesex; F. G. Beauchamp, Birmingham; A. D. Bellios, St. Thomas's; J. G. Y. Bell, King's Coll.; R. J. I. Bell, St. Bart.'s; J. L. Berry, Birmingham; H. McI. Birch, Adelaide and London; E. Bowen-Jones, Guy's; H. C. Boyde, St. Bart.'s; G. P. Brooks, London; A. S. S. Brown, Liverpool; J. W. D. Buttery, St. Bart.'s; F. F. R. Carreck, St. Mary's; R. T. Chadwick, St. Bart.'s; H. N. Collier, Guy's; Celia M. M. Culver-Evans, Royal Free; R. S. Davidson, Manchester; C. I. Davies, London; J. J. F. Dunn, St. Mary's; J. Y. Eccles, St. Thomas's; R. W. Edwards and A. Elliott, Guy's; E. Evans, Sheffield; M. Fine, London; S. J. Firth, Manchester; M. Fishman, St. Bart.'s; H. K. Fozdar, London; E. A. Freeman, St. Bart.'s; L. O. F. Fysh, London; J. Gore, Birmingham; Edith L. Gould, Royal Free; S. J. P. Gray, St. Bart.'s; A. W. T. Green, Middlesex; Margaret K. Green, St. Mary's; T. W. Griffiths, Middlesex; J. L. Groom, Guy's; A. Gross, St. Bart.'s; Emily M. Hall, St. Mary's; Helen M. Harris, Royal Free; L. F. A. Harrison, St. Bart.'s; J. W. Hart, Univ. Coll.; B. E. Hawkins, Guy's; J. C. Heal, Liverpool; C. H. Heaton, Birmingham; C. H. Ho, St. Thomas's; J. C. Hogg and L. Holmes, St. Bart.'s; E. Hughes, Liverpool; T. L. Jenkins, Middlesex; C. W. Jones, King's Coll.; Helen V. Jones, St. Mary's; R. Jones, Charing Cross; J. J. Keevil, St. Thomas's; J. H. Kitson, Manchester; Y. N. Lal, Dundee; I. Landon, St. Bart.'s; R. L. J. Le Clezio, St. Thomas's; H. E. Lewis, Guy's; I. McPherson, Middlesex; M. L. Maley and T. E. Malins St. Bart.'s; W. N. Maple and H. R. R. Mavor, St. Thomas's; K. N. Mawson, Liverpool; R. C. May, Guy's; R. H. Metcalfe, St. Thomas's; G. C. Milner, London; Mary A.

Monro, Royal Free; W. J. Moody, London; G. C. Morris, St. Mary's; W. B. Norcott, Guy's; Jessie G. A. Norman, Charing Cross; J. E. J. Palser, London; C. F. Parry, Guy's; W. E. C. Parry, Univ. Coll.; G. Paterson, St. Thomas's; H. L. Peake, Guy's; L. V. Pearson, St. Bart.'s; H. Peaston, Liverpool; B. Perchman, Charing Cross; T. J. Pittard, St. Bart.'s; W. G. Platt, Leeds; C. G. E. Plumstead, St. George's; F. H. Pratt, Guy's; F. E. Roberts, Birmingham; Victoria A. Roberts, Royal Free; K. E. R. Robertson, St. Mary's; K. G. Salmon, St. Bart.'s; H. Scudamore, London; F. L. G. Selby, St. Mary's; F. G. A. Shaheed, Westminster; Sara C. A. Sharpe, St. Mary's; T. St. J. H. Silvester, J. A. Simons, and E. G. Smallbone, Guy's; R. H. Smith, Manchester; M. Sourasky, Leeds; S. Speck, Middlesex; B. L. Steele, Univ. Coll.; Gertrude H. C. Stinson, Royal Free; F. W. Ta'Bois, London; C. C. Taffs, St. Thomas's; D. E. Thomas, St. Bart.'s; D. W. R. Thomas, Middlesex; J. E. Thomas, Cardiff; Dorothy I. Valentine, Liverpool; D. C. Virmani, Charing Cross; P. R. Viviers and W. F. Waudby-Smith, St. Bart.'s; Elizabeth M. Whishaw, St. Mary's; E. A. White and J. S. Whitton, St. Bart.'s; G. O. Williams, Liverpool; T. I. Williams, Guy's; J. H. Willis, London; D. B. Wilson, Birmingham; H. F. Wilson, London; and H. Yousri, Birmingham.

Midwifery.—J. H. Anderson, Guy's; D. G. Balakirsky, Middlesex; C. V. N. Baldry, Sydney; H. I. C. Balfour, St. Bart.'s; W. A. Ball, King's Coll.; J. M. Bassett, Edinburgh; J. R. Beal, Manchester; C. E. Beare and M. Behr, Middlesex; A. D. Belilios, St. Thomas's; J. G. Y. Bell, King's Coll.; W. F. D. Benton, St. Bart.'s; S. N. Bhansali, Rotunda; S. S. Bhatnagar, Middlesex; G. H. Bickmore, Charing Cross; C. A. Birch, Liverpool; Mabel C. Booysen, Charing Cross; H. C. Boyde, St. Bart.'s; G. J. O. Bridgeman, Cambridge and St. George's; Theodora Brookes, Royal Free; A. S. S. Brown, Liverpool; J. A. S. Brown, London; T. E. Brown, St. Thomas's; W. Buckley, London; H. A. Bulman, Middlesex; R. C. L'E. Burges, Birmingham; T. J. Burke, Cardiff and Charing Cross; J. W. D. Buttery, St. Bart.'s; H. A. Byworth, St. George's; Irene F. Callender, St. Mary's; J. P. Carpenter, Birmingham; A. G. Chamberlain, St. Bart.'s; R. Childs, St. Thomas's; Dorothy A. Chown and Alison M. Clark, St. Mary's; J. G. Cox, St. Bart.'s; E. A. Darukhanawalla, Middlesex; A. E. de Fonseka, King's Coll.; W. H. Dowell, Guy's; Muriel E. Drew, Bristol; F. W. Dunn, Charing Cross; J. Dywien, Guy's; R. W. B. Ellis and A. K. H. El Shurbagi, St. Thomas's; H. Evans, London; T. F. Everett, Middlesex; J. A. Eyres, King's Coll.; O. F. Farndon and R. R. Fells, St. Bart.'s; M. Fine, London; M. Fishman, St. Bart.'s; W. S. Flowers, Leeds; E. A. Freeman and W. F. Gaisford, St. Bart.'s; Margaret E. J. Gashion and Edith Giles, Charing Cross; B. M. C. Gilsenan, St. Bart.'s; A. Glatt, Liverpool; Dorothy Godden, Royal Free and St. Mary's; Myrtle S. Goldrich, Charing Cross; Edith L. Gould, Royal Free; Phyllis M. Grainger, Birmingham; S. J. P. Gray, St. Bart.'s; W. H. Green, Middlesex; C. R. M. Greenfield, St. Bart.'s; L. A. N. Greenway, King's Coll.; Margaret H. Greg, Manchester; G. J. Gregerson, Adelaide and London; J. C. P. Grey, St. Thomas's; G. J. Gross, King's Coll.; W. V. Harke, St. Thomas's; Helen M. Harris, Royal Free; L. J. Haydon, St. George's; Dorothy G. Hervey, Birmingham; J. D. Hindley-Smith, St. George's; W. S. Hinton, B. L. Hodge, J. C. Hogg, and L. Holmes, St. Bart.'s; R. St. J. Honner, Sydney and London; Kathleen M. Horton, London; E. Hughes, Liverpool; C. L. Hunt, St. Bart.'s; D. S. Jackson, St. Mary's; P. B. Jackson, Middlesex; W. T. Jones, Cardiff; A. K. A. Khalik, Cairo; I. Landon, St. Bart.'s; F. J. L. Lang, St. Mary's; R. L. J. Le Clezio, St. Thomas's; D. W. E. Lloyd, Guy's; Janet Lochore, Westminster and Royal Free; Joan L. Lush, Univ. Coll.; Elsie Lyon and Margaret B. MacDonald, Charing Cross; J. R. Macdougall, St. Bart.'s; Alice M. C. Macpherson, Royal Free; I. McPherson, Middlesex; M. L. Maley, St. Bart.'s; R. Marnham, St. George's; Mary A. Marshall, St. Mary's; S. R. Matthews, Middlesex; K. N. Mawson, Liverpool; C. A. L. Meredith, Middlesex; T. C. Mort, Cardiff; A. H. Musgrove and D. A. Newbery, Guy's; E. J. Newman, London; Norah M. A. Niall, Charing Cross; H. A. Nicholls, St. Bart.'s; M. G. Nimatallah, Guy's; M. Odess, St. Mary's; C. E. Ogden, St. Bart.'s; E. J. O'Keeffe, London; Gwynedd M. E. Olive, Royal Free; A. Orlansky, Middlesex; Catherine E. Orr-Ewing, Royal Free; M. N. Oster, Westminster; M. E. J. Packer, Bristol; J. G. Paley, St. Bart.'s; Florence M. Parsons, Charing Cross; L. V. Pearson, St. Bart.'s; G. E. G. Peirce, St. Mary's; K. R. T. Peiris, King's Coll.; L. C. Peringuey, Manchester; G. L. S. Plumbly, Univ. Coll.; N. R. Pooler, St. Mary's; F. H. Pratt, Guy's; D. C. Price, St. Bart.'s; Agnes M. Ramsbotham, Royal Free; Margaret G. P. Reed, King's Coll.; R. I. Richards, St. George's; Margaret A. Ritchie, Charing Cross; Janet M. Robertson, St. Mary's; Alice L. Robson, Royal Free; G. E. Rowan, St. Thomas's; I. Sachs, Middlesex; H. Scudamore, London; S. T. Seccombe, St. Thomas's; H. N. Seymour-Isaacs, St. Bart.'s; H. Shenouda, Cardiff; H. J. A. Simmons, Middlesex; Nancie A. Simmons, Charing Cross; J. A. Simons, Guy's; R. K. Smith, St. Bart.'s; S. Speck, Middlesex; J. Spencer, St. Bart.'s; C. A. Stanley, St. Thomas's; Nettie H. Stein, St. Mary's; T. W. Stephens, St. Thomas's; A. F. H. Stewart, Guy's; R. G. Strouts, London; H. Syed, King's Coll.; F. W. Ta'Bois, London; L. D. J. Telesphor, Univ. Coll.; G. P. Thorold, St. Thomas's; F. T. Thorpe, Birmingham; O. R. Tisdall, St. Bart.'s; Mary M. Tulloch, Charing Cross; Beatrice E. Turner, Royal Free; I. Vitenson, London; P. R. Viviers, St. Bart.'s; E. Walsh, Manchester; L. H. F. Walton, St. Thomas's; Elizabeth M. Whishaw, St. Mary's; C. H. C. White, Guy's; E. A. White and J. S. Whitton, St. Bart.'s; Addie Wilkes, Charing Cross; E. G. Williams, Leeds; Jane C. Williams, St. Mary's; J. L. Williams, Middlesex; A. G. Wilson, St. Thomas's; H. F. Wilson, London; Eileen C. Wise, King's Coll.; H. P. Yew, Guy's; H. Yousri, Birmingham; and A. M. M. Zelwer, St. George's.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—An extraordinary Comitia of the College was held on May 14th, Sir Humphry Rolleston, the President, occupying the chair. It was announced that Dr. Bernard Hart would deliver the Goulstonian lectures, Dr. A. Shadwell the FitzPatrick lectures, and Sir Thomas Horder the Lumleian lectures for 1926.—Those gentlemen who were elected to the Fellowship on April 30th were admitted as Fellows.—A supplementary list of 96 candidates to whom licences to practise physic had been granted was submitted as follows. (The medical schools at which the candidates studied will be found in the list of the Royal College of Surgeons.)

*Agnes L. Adam, David Aserman, Edmund L. Auguste, Charles W. Bamford, Philip S. Bell, Riad H. Bestawros, Arthur T. Bettinson, *Margaret Bowstead, Paul D. Braddon, *Gwenddolen J. Brooke, *Stella M. Brown, *Dora M. Cadman, *Mary E. Campbell, Walter E. Chiesman, *Eileen M. Clarke, *Gladys M. Clarke, *Winifred M. Clement, Douglas R. T. Clendon, Isaac Cohen, Ronald W. Cuningham, Stefanus H. Daneel, Gwylon Davies, Howell J. Davies, Douglas S. Dixon, John V. Dockray, Dennis C. Drake, William Egan, Valentine H. Ellis, Anthony J. K. Finch, *Barbara Finch, *Winifrede M. Fish, Victor L. Fisher, Mark Footerman, Ganesh V. Gollerkeri, Arkyl S. Gough, Ralph Green, Charles J. Grosch, Ronald F. Guymer, Leslie B. Haye, John B. Hayes, *Barbara J. Hick, *Nancy M. Hield, Alfred R. Hill, Alan T. Howell, John U. Human, *Dorothea A. C. Hunt, Jack N. Jacobson, Herman Kessel, Arthur M. Lazarus, Samuel Lerner, Solomon Levy, Cyril J. Lovering, Derek A. Lubbock, James W. McGuire, Alexander C. MacLeod, Douglas H. MacLeod, Duncan R. Martin, Alistair Mead, George C. Michael, *Ruth L. Milne, Edward F. Molony, John P. Monkhouse, Herbert Moore, Arthur H. Morley, Victor M. Morris, Isaac S. Moscow, Gardner W. Murray, George H. Pringle, Philip E. Pym, *Fanny Rabinowitz, David I. Rees, Thomas Rees, *Nellie H. Reynolds, Alec W. Riddolls, Clifford E. Roberts, Alexander E. Ross, *Edith M. Ross-Johnson, Thomas W. E. Royden, *Martha N. Russell, Hellmuth H. E. Schulz, Harold J. Selby, Charles F. J. Smith, *Beatrice M. Smithies, Kenneth A. Soutar, John M. Stirling, Stephen V. Strong, *Sylvia Sworn, James E. Swyer, Kim H. Tan, John G. S. Thomas, Philip G. Trafford, Neville A. A. van Buuren, Theodore E. Walsh, *Helen D. Watson, Rudolph A. K. Wiener, and Hector G. Wimbush.

* Under the Medical Act, 1876.

The application of Dr. Hugh Roger Smith for restoration of the Membership, relinquished in 1919, was granted.—Dr. Raymond Crawfurd was appointed a member of the Committee of Management to fill the vacancy caused by the death of Dr. J. A. Ormerod.—The President announced that he had nominated Sir P. Horton-Smith Hartley as representative of the College at the Conference of the National Association for Prevention of Tuberculosis.—It was decided to appoint a subcommittee to consider and codify the by-laws in view of recent alterations in them.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At an ordinary meeting of the Council of the College on May 14th, Sir John Bland-Sutton, President, in the chair, the Secretary reported the death of Sir Rickman Godlee, Bart., K.C.V.O., past President and past member of the Council and of the Court of Examiners, whereupon the following vote of condolence was unanimously passed:—

That the Council hereby express their deep regret at the death of Sir Rickman Godlee and their very sincere sympathy with Lady Godlee in the great loss which she has sustained. The Council also desire to express their grateful sense of the many services rendered to the College by Sir Rickman Godlee as an examiner and member of the Council, and especially to record their appreciative recognition of the distinction and ability with which he fulfilled the duties of President during his three years of office. The Council feel that the surgical profession has lost one of its ablest leaders whose skill in practice and many accomplishments will cause his name always to be held in honoured remembrance.

A letter was read from Mr. G. Percy Dodds-Parker resigning his appointment as a member of the Court of Examiners in Surgery. The resignation was accepted and the vacancy will be filled at the Quarterly Council in June.—Prof. Antonin Gosset, of Paris, was introduced, and having signed the roll of Honorary Fellows was presented with the Diploma of Honorary Fellowship.

Diplomas of Member were conferred upon 234 candidates (including 42 women) who have passed the requisite examinations and have complied with the by-laws. The following are the names and medical schools of the successful candidates:—

Agnes L. Adam, Royal Free; C. S. Anderson, St. Mary's; D. Aserman, Cambridge and St. Thomas's; E. L. Auguste, Middlesex; C. W. Bamford, Calcutta and London; W. A. Barnes, Cambridge and St. Bart.'s; St. C. E. J. Barrett, Belfast and Middlesex; J. R. Beagley, St. Bart.'s; I. C. P. Beauchamp, Cambridge and Guy's; Diana J. K. Beck,

Royal Free; P. R. T. Becker, Cape and Guy's; P. S. Bell, Westminster; Elizabeth E. Benson, Bristol; R. H. Bestawros, Cairo and London; A. T. Bettinson, St. Bart.'s; C. P. Blacker, Guy's; W. R. W. Bonner-Morgan, Cardiff and St. Bart.'s; E. H. Boodrie, Calcutta and St. Mary's; Margaret Bowstead, Royal Free; D. de C. Boxill, Long Island and St. Mary's; P. D. Braddon, Sydney; P. G. Brain, London; M. K. Braybrooke, St. George's; R. B. Brew, Univ. Coll.; C. W. Brook, Cambridge and St. Bart.'s; Gwenddolen J. Brooke, Univ. Coll.; G. M. Brooks, Birmingham; Stella M. Brown, King's Coll.; M. F. Butler, Guy's; Dora M. Cadman, Royal Free; Mary E. Campbell, Charing Cross; L. I. M. Castleden, St. Bart.'s; Enid A. Cefriog-Cadle, Royal Free; M. Chandra, Punjab and St. George's; R. J. K. Chattey, Middlesex; W. E. Chiesman, Cambridge and St. Thomas's; J. E. Church, Cambridge and St. Bart.'s; Eileen M. Clarke, Royal Free; Gladys M. Clarke, Royal Free and St. Mary's; Winifred M. Clement, Royal Free and Charing Cross; D. R. T. Clendon, Univ. Coll.; Hilda A. Cohen, Cardiff; I. Cohen, Middlesex; Jean Cooper, Punjab and Royal Free; Catherine A. Cowan, Royal Free; P. V. Crameri, Univ. Coll.; D. P. Crawford, St. Thomas's; D. A. L. Crawshaw, Guy's; Victoria M. Crosse, Royal Free; G. P. Crowden, Univ. Coll.; J. Crowther and J. Cumming, Manchester; R. W. Cuningham, Guy's; R. N. Curnow, St. Bart.'s; R. R. Dalling, Liverpool; S. H. Daneel, Cape and Guy's; H. E. Daniel, Cardiff and St. Bart.'s; G. Davies, Guy's; H. J. Davies, St. Mary's; R. K. Debenham, Cambridge and London; A. E. de Chazal, Univ. Coll.; J. D. Dillon, Liverpool and St. Bart.'s; D. S. Dixon, Middlesex; J. V. Dockray, Cambridge and Middlesex; W. H. A. Dodd, Liverpool; A. S. M. Douglas, Guy's and St. George's; J. L. C. Doyle, St. Bart.'s; D. C. Drake, Guy's; W. Egan, Charing Cross; V. H. Ellis, Cambridge and St. George's; G. I. Evans, Manchester; P. F. Evans, London; Christabel S. Eyre, Charing Cross; C. R. Fielding, Manchester; A. J. K. Finch, St. Mary's; Barbara Finch, Royal Free; Winifrede M. Fish, King's Coll.; V. L. Fisher, Guy's; F. J. T. Foenander, Middlesex; M. Footerman, Univ. Coll.; C. A. Francis, Cambridge and St. Bart.'s; D. B. Fraser, St. Bart.'s; H. E. Gamlen, St. Thomas's and Durham; A. W. Gardner, St. Bart.'s; J. H. Gibbens, Cambridge and St. Thomas's; G. D. Gillbard, Middlesex; A. Gompertz, Durham; R. T. Goodyear, Cambridge and Liverpool; G. V. Gollerkeri, Bombay and Middlesex; A. S. Gough, Guy's; D. R. Grant, Alberta and Guy's; R. Green, St. Bart.'s; C. J. Grosch, Cambridge and Middlesex; R. F. Guymer, Cambridge and St. Thomas's; G. S. Hale, St. Bart.'s; S. Harris, Oxford and St. Thomas's; J. H. Hartland, Birmingham; F. C. Haward, St. Thomas's; L. B. Haye, Univ. Coll.; J. B. Hayes, Charing Cross; Marjorie F. M. Hayward, London; H. L. Heath, Birmingham; Catherine M. Hext, London; Barbara J. Hick, Royal Free and St. Mary's; Nancy M. Hield, Royal Free; A. R. Hill and H. F. Hiscocks, St. Bart.'s; F. D. M. Hocking, Middlesex; R. G. Hodder, St. Thomas's; A. T. Howell, Cambridge and St. Thomas's; H. B. Howell, St. Bart.'s; J. E. Howie, Liverpool; W. Hughes, Middlesex; J. U. Human, Guy's; Dorothea A. C. Hunt, Royal Free; J. T. Hunter, St. Bart.'s; J. N. Jacobson, Cape and St. Thomas's; I. S. Jacobsz, Cape and Guy's; M. E. M. Jago, Guy's; L. E. Jones, Cardiff and St. Thomas's; L. R. Jones, Guy's; W. H. M. Jones, Cardiff; B. Kaplansky, Cape and London; P. N. Kapur, Lahore and London; R. St. J. Kemm, Bristol; H. Kessel, Guy's; G. M. King, Cardiff and King's Coll.; J. G. Kingsbury, Guy's; C. K. Lakshmanan, Madras and St. Bart.'s; J. C. C. Langford, St. Bart.'s; Kathleen M. Lankester, Royal Free; A. M. Lazarus, Melbourne; G. A. Q. Lennane, Cambridge and St. Thomas's; S. Lerner, Univ. Coll.; H. M. O. Lester, St. Thomas's; Muriel A. Lester, Royal Free; S. Levy, Middlesex; T. J. Lloyd, Cardiff; C. J. Lovering, Cardiff and Middlesex; D. A. Lubbock, Univ. Coll.; J. W. McGuire, Calcutta and St. Mary's; A. C. MacLeod and D. H. MacLeod, Middlesex; A. McMillan, Birmingham; D. R. Martin, Guy's; S. P. Meacock, Cardiff and Guy's; A. Mead, St. Thomas's; G. C. Michael, London; Ruth L. Milne, Royal Free; J. G. Milner, Cambridge and St. Bart.'s; V. S. Mitcheson, Cambridge and Birmingham; E. F. Molony, Cambridge and St. Bart.'s; J. P. Monkhouse, St. Mary's; S. K. Montgomery, Univ. Coll.; A. J. Moody and C. A. Moody, St. Bart.'s; Florence I. R. Moore, Royal Free; H. Moore, Belfast and Guy's; A. H. Morley, Leeds; V. M. Morris, Middlesex; W. G. R. Morris, Bristol; I. S. Moscow, St. Bart.'s; C. A. Mulligan, Manchester; G. W. Murray, Guy's; Marjorie Murrell, Royal Free; W. Ogden, St. Bart.'s; J. B. Oldham, Liverpool; Dorothy M. Payton, Birmingham; A. P. Pearce, Leeds and London; C. O. Perera, Ceylon; A. Pierce, Birmingham; E. P. Pratt, Durham and St. George's; B. Press, St. Bart.'s; G. H. Pringle, Univ. Coll.; P. E. Pym, Cambridge and St. Bart.'s; Fanny Rabinowitz, Charing Cross; J. Rafalowsky, Zurich and Univ. Coll.; S. Randall, London; D. I. Rees, St. Thomas's; T. Rees, Manchester and St. Bart.'s; Nellie H. Reynolds, King's Coll.; Grace D. Rice, St. Mary's; H. S. Rich, Sydney and Middlesex; A. W. Riddolls, Guy's; G. D. Robb, Otago and Middlesex; C. E. Roberts, Oxford and London; A. E. Ross, St. Bart.'s; Edith M. Ross-Johnson, Univ. Coll.; J. E. C. Rouse, St. George's; A. T. F. Rowley, Bristol; T. W. E. Royden, Cambridge and St. Bart.'s; Martha N. Russell, Cape and Royal Free; H. H. E. Schulz, Cape and St. Thomas's; T. A. Seekings, Univ. Coll.; H. J. Selby, Guy's; R. Sellick, St. Thomas's; D. G. Shields, Cambridge and St. Bart.'s; C. F. J. Smith, St. Mary's; J. R. Smith, Cambridge and St. Bart.'s; Beatrice M. Smithies, Charing Cross; K. A. Soutar, St. Thomas's; J. S. Spickett, Cardiff and St. Bart.'s; A. A. Spiro, Manchester; E. F. Stead, London; G. H. Steele, Univ. Coll.; J. M. Stirling, Madras and Charing Cross; S. V. Strong, Guy's; Sylvia Sworn, Univ. Coll.; J. E. Swyer, London; J. S. Symons, London; H. K. Tan, Hong-Kong and Middlesex; Catharine F. Taylor, Royal Free; G. Taylor, St. Mary's; J. G. S. Thomas, Oxford and Guy's; P. G. Trafford, Guy's; Henrietta Trend, Royal Free; Joan W. Urwick, Charing Cross; K. H. Uttley, Cambridge and Univ. Coll.; N. A. A. van Buuren, Cape and Univ. Coll.; J. M. van Schalkwyk, Cape and Guy's; T. E. Walsh, Cambridge and St. Thomas's; Y. S. Wan, Cambridge and St. Bart.'s; E. C. Warner and R. L. Waterfield, Guy's; Helen D. Watson, Royal Free; M. Weisman, Paris and Manchester; W. S. Whimster, Guy's; R. A. K. Wiener, Cape and St. Thomas's; R. M. Windeyer, Cambridge and St. Bart.'s; H. G. Wimbush, Cambridge and Guy's; K. K. Wood, Manchester; J. Wood, King's Coll.; H. M. Woodman, Cambridge and King's Coll.; and H. C. Wykerd, Cape and London.

UNIVERSITY OF LONDON: REPORT OF THE PRINCIPAL OFFICER.—Sir Cooper Perry, in his report on the work of the University during the year 1924-25, records a slight decrease in the total number of admissions and of matriculations compared with the previous year. The chief item of medical interest during the year was the granting of a Charter to the London School of Hygiene and Tropical Medicine in consequence of which the Department of Bacteriology and Public Health of King's College will be closed at the end of the present session. Prof. H. R. Kenwood having resigned the Chadwick Chair of Hygiene at University College, no steps are being taken at present to fill that chair. The Principal Officer adverted to the foundation of new chairs in the hospital medical schools announced during the year: a Chair of Physics at St. Bartholomew's Hospital Medical College to which Dr. F. L. Hopwood has been appointed; a Chair of Medicine at the London Hospital Medical College, Dr. A. W. M. Ellis occupying it; the S. A. Courtauld Chair of Anatomy at the Middlesex Hospital Medical School with Dr. T. Yeates as the first holder; the Chair of Biochemistry at the same school; a new Chair of Pathology at the London School of Medicine for Women with Dr. J. H. Dible as the first holder; the granting of the title of Professor of Anatomy to Mrs. M. F. Lucas Keene at the same school, and the title of Professor of Surgery to Mr. C. C. Choyce at University College Hospital Medical School. During the year progress has been made in the visitatorial inspection of the various schools of the University. The Principal Officer notes that correspondence has passed during the year between the University and the Treasury upon the subject of the Bloomsbury site, decision on which is still deferred. Whatever may be the result of the deliberations of the departmental committee, Sir Cooper Perry writes: "We may await with confidence its findings, not unmindful that in whatever form the body of our constitution be moulded, the spirit which gives life and growth remains always within ourselves alone."

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION.—Beginning on June 2nd, a four weeks' course in the study of Venereal Disease will be held at the London Lock Hospital (Dean-street). The out-patient departments will be open to post-graduates enrolling for the course and in the afternoons will be given a lecture by one of the members of the staff dealing with the diagnosis and methods employed for combating this disease. As the course is only held if eight entries are received, early application is desirable. There will also be a four weeks' course in Dermatology at the St. John's Hospital from June 2nd to 27th. From June 3rd to 25th eight clinical demonstrations will be given at the London School of Hygiene and Tropical Medicine. The subjects considered will be the more important diseases of tropical countries illustrated by cases in the hospital. There will also be a course in Gynæcology at the Chelsea Hospital for Women from June 8th to 27th, when opportunities will be afforded for attending operations, demonstrations in the out-patient department, and ward rounds. From June 8th to 20th, at the Victoria Park Hospital for Diseases of the Heart and Lungs, there will be given a special course consisting of lectures and demonstrations on Sunlight Treatment, Artificial Pneumothorax, the Electrocardiograph, &c. From June 15th to July 11th is a four weeks' course in Urology at the St. Peter's Hospital for Stone. A fortnight's intensive course in Medicine, Surgery, and the Specialties will take place at the London Temperance Hospital from June 22nd to July 4th. Copies of the syllabus of each of the foregoing courses and the programme of the Fellowship of Medicine may be obtained from the Secretary, at 1, Wimpole-street, London, W. 1.

VISIT OF AMERICAN DOCTORS TO DUBLIN. The arrangements for the visit to Dublin of the party of American doctors which is soon to tour Europe are nearly complete. So many of the visitors wish to include Ireland in their tour that it has been found necessary to divide the party into two, as the hotel accommodation in Dublin would be insufficient. According to present arrangements, the first

party will reach Dublin on the morning of June 11th. On that morning the guests will attend at any of the city hospitals where the various surgeons will operate or exhibit cases, and the physicians will conduct parties through the wards. In the afternoon Prof. F. C. Purser will open a discussion on encephalitis lethargica, in which some of the Americans will take part. Next morning there will be a discussion on exophthalmic goitre, to be opened by Prof. T. G. Moorhead; Mr. C. H. Mayo has promised to take part in this discussion. In the afternoon the Governor-General is giving a garden party, and the visitors then depart for Belfast. The second party is to arrive on the morning of Saturday, the 13th, and will leave for Belfast on Monday afternoon, the 15th. On the Saturday morning Dr. G. FitzGibbon and Prof. J. W. Bigger will open a discussion on puerperal sepsis. At all the sessions there will be exhibitions of rare and interesting cases.

LEBANON HOSPITAL FOR MENTAL DISEASES, SYRIA. The annual meeting will be held at the rooms of the Medical Society of London, 11, Chandos-street, Cavendish-square, W., on Wednesday, May 27th, at 3.30 P.M. Dr. E. W. G. Masterman will be in the chair, and the speakers will include Sir Wyndham Deedes and Pastor Hoffmann de Visme (representing Switzerland).

FAILURE TO NOTIFY SMALL-POX.—For failing to notify that two of his children were suffering from small-pox a man, who was stated to be a confectioner, at Dukinfield, Lancs, on May 14th, was fined £5 and a daughter who assisted him was fined £1, the total amount of costs being £10 15s. It was stated in court that although the children had small-pox the defendants continued to bake and sell foodstuffs.

THE LATE MR. W. PERCY BLUMER, F.R.C.S.—The death occurred in London, on May 12th, of William Percy Blumer, F.R.C.S. Edin., at the age of 70. Mr. Blumer had an extensive practice in Sunderland before coming to London in 1914. He received his medical education in Edinburgh, at the University and the Royal Colleges, and qualified L.R.C.P. & S. in 1876, obtaining the F.R.C.S.E. in 1884. He settled in Sunderland, and for over 20 years was an honorary surgeon of the Sunderland Royal Infirmary. He also held the posts of honorary surgeon to the Monkwearmouth Hospital and to the Durham County and Sunderland Eye Infirmary. His contributions to medical literature include several papers on abdominal surgery in the medical journals, and in 1911 he described a case of albinism which was published in Pearson, Nettleship, and Usher's Monograph on Albinism in Man. Mr. Blumer leaves a widow and two daughters, his son having been killed in the war.

Medical Diary.

SOCIETIES.

ROYAL SOCIETY, Burlington House, W.
THURSDAY, May 28th.—4.30 P.M.—*Papers to be read:* R. J. Ludford: Cell Organs during Secretion in the Epididymis. (Communicated by Prof. A. V. Hill.) R. J. Ludford: Nuclear Activity in Tissue Cultures. (Communicated by Prof. A. V. Hill.) J. Needham and Dorothy Needham: The Hydrogen-Ion Concentration and the Oxidation Reduction Potential of the Cell Interior. A Micro-Injection Study. (Communicated by Sir Frederick Hopkins.) F. W. R. Brambell: The Oogenesis of the Fowl (Gallus Bankiva). (Communicated by Prof. J. P. Hill.)

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W.
MEETINGS OF SECTIONS.

Monday, May 25th.

ODONTOLOGY: at 5.30 P.M.
At the Royal College of Surgeons, Lincoln's Inn-fields, W.C.
Annual General Meeting:
Election of Officers and Council.
Casual Communication:
Mr. E. W. Fish: Circulation of Lymph in the Dentine (preliminary report).
Exhibition:
Sir Frank Colyer: Specimens recently added to the Odontological Museum.

Tuesday, May 26th.

MEDICINE: at 5.30 P.M.
Annual General Meeting:
Election of Officers and Council.

Wednesday, May 27th.

COMPARATIVE MEDICINE: at 5 P.M.
Annual General Meeting:
Election of Officers and Council.
Paper:
Dr. J. H. Sequeira: Parasitic Affections of the Skin communicated from Animals to Man.

Thursday, May 28th.

EPIDEMIOLOGY AND STATE MEDICINE: at 5.30 P.M.
Annual General Meeting:
Election of Officers and Council.
Death of Dr. Dudfield: Resolution to be moved by Senior Honorary Secretary.
Paper:
Dr. John Brownlee: The Health of London in the Eighteenth Century.

UROLOGY: at 8.30 P.M.
Annual General Meeting:
Election of Officers and Council.
Paper:
Mr. Winsbury White: Hydronephrosis.
(Mr. White will show his Hunterian specimens.)

MEDICAL SOCIETY FOR THE STUDY OF VENEREAL DISEASES, 11, Chandos-street, Cavendish-square, W.
FRIDAY, May 29th.—8.30 P.M., Papers by Sir Henry Simson and Mr. Aleck Bourne on the Diagnosis and Treatment of Venereal Diseases in Pregnancy. A Discussion will follow.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION, 1, Wimpole-street, W.
MONDAY, May 25th, to SATURDAY, May 30th.—WEST LECTURE HALL, Royal Society of Medicine. Lecture arranged by the Fellowship of Medicine, and open to all members of the medical profession. At 5.30 P.M., Mr. G. Gordon-Taylor: The Prevention and Treatment of Shock in the Surgery of the Abdomen.—LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W. Special Post-graduate Course for Practitioners. Daily at 4.30 P.M., Clinical demonstration for one hour, followed by a lecture for half an hour. General medicine, surgery, and special departments (second week).—INFANTS HOSPITAL, Vincent-square, S.W. Special Course in Diseases of Infants. Lectures and demonstrations every afternoon. "Round-table" Conference on Friday, and special visits on Saturday afternoon and Sunday morning.—HOSPITAL FOR DISEASES OF THE SKIN, Blackfriars, S.E. Post-graduate Course in Dermatology, consisting of instruction in the Out-patient Department every afternoon, and a Venereal Clinic on Tuesday and Friday (second week).—CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL, Gray's Inn-road, W.C. Special Course in Laryngology, Rhinology, and Otology. Daily operations, lectures, and clinics. Morning and afternoon sessions. Operative surgery class every morning. Clinical and Operative Courses may be taken separately (second week).—MAUDSLEY HOSPITAL, Denmark-hill, S.E. Course in Psychological Medicine. Lectures on the Psychoneuroses, on the Practical Aspect of Mental Deficiency, on the Pathology of Mental Diseases; Demonstrations in Clinical Psychiatry and Clinical Neurology (second week).

WEST LONDON POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.
MONDAY, May 25th.—12 noon, Mr. Simmonds: Applied Anatomy. 2 P.M., Mr. Addison: Surgical Wards. 2 P.M., Dr. Scott Pinchin: Medical Out-patients.
TUESDAY.—11 A.M., Mr. Endean: Venereal Diseases. 12 noon, Dr. Burrell: Chest Cases. 2.30 P.M., Mr. Tyrrell Gray: Surgical Wards.
WEDNESDAY.—11 A.M., Medical Registrar: Medical Wards. 2 P.M., Dr. Owen: Medical Out-patients. 2 P.M., Dr. Dowling: Skin Dept.
THURSDAY.—11 A.M., Sir Henry Simson: Gynæcological Wards. 12 noon, Dr. Pritchard: Modern Methods in Medicine. 4 P.M., Dr. Dowling: Seborrhœa and Seborrhœic Dermatitis.
FRIDAY.—11 A.M., Dr. McDougal: Electrical Dept. 12 noon, Surgical Registrar: Surgical Pathology. 2 P.M., Mr. Vlasto: Throat, Nose, and Ear Dept.
SATURDAY.—10 A.M., Dr. Saunders: Medical Diseases of Children. 10 A.M., Mr. Banks-Davis: Operations on Throat, Nose, and Ear.
Daily, 10 A.M. to 6 P.M., Saturdays, 10 A.M. to 1 P.M., In-patients, Out-patients, Operations, Special Departments.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.
TUESDAY, May 26th.—4.30 P.M., Mr. E. S. Pierrepont: Various Methods of Tooth Extraction.
FRIDAY.—4.30 P.M., Dr. J. B. Alexander: Colitis.
Daily.—Clinics in General and Special Departments, Demonstrations, Operations, &c.

LONDON SCHOOL OF DERMATOLOGY, St. John's Hospital, Leicester-square, W.C.
TUESDAY, May 26th.—5 P.M., Dr. Gray: Sclerema Neonatorum.
THURSDAY.—5 P.M., Dr. Adamson: Lichen Planus.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.
THURSDAY, May 28th.—4 P.M., Dr. A. M. H. Gray: The Eczemas of Children.

ST. MARY'S HOSPITAL INSTITUTE OF PATHOLOGY.
THURSDAY, May 28th.—5 P.M., Dr. W. E. Gye: The Filterable Viruses.

CHADWICK PUBLIC LECTURES.
MONDAY, May 25th.—5.15 P.M. (at the Royal Society of Medicine), Dr. Emile Brumpt: How to Conduct an Antimalarial Campaign.
FRIDAY.—5.15 P.M. (at the Royal Society of Arts), Dr. Emile Brumpt: The Prophylaxis of Sleeping Sickness.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C. 1.

POST-GRADUATE COURSE: MAY–JUNE, 1925.

CLINICAL LECTURES AND DEMONSTRATIONS.

MONDAY, May 25th.—2 P.M., Out-patient Clinic: Dr. Hinds Howell. 3.30 P.M., Optic Neuritis and Papilloedema: Mr. Williamson Noble.

TUESDAY, May 26th.—2 P.M., Out-patient Clinic: Dr. Walshe. 3.30 P.M., Fractures of the Skull: Mr. Donald Armour.

THURSDAY, May 28th.—2 P.M., Out-patient Clinic: Dr. Kinnier Wilson. 3.30 P.M., Disorders of Gait: Dr. Risien Russell.

FRIDAY, May 29th.—2 P.M., Out-patient Clinic: Dr. Gordon Holmes. 3.30 P.M., The Cerebro-spinal Fluid in Meningitis: Dr. Greenfield.

COURSE OF LECTURES AND DEMONSTRATIONS ON THE PATHOLOGY OF THE NERVOUS SYSTEM.

MONDAY, June 8th.—12 noon, The Neuron: Dr. J. G. Greenfield.

COURSE OF LECTURES AND DEMONSTRATIONS ON THE ANATOMY AND PHYSIOLOGY OF THE NERVOUS SYSTEM.

TUESDAY, May 26th.—12 noon, The Physiology of the Motor Systems: Dr. Walshe.

THURSDAY, May 28th.—12 noon, The Sensory System: Dr. Walshe.

Dr. H. J. Macbride will give a COURSE OF EIGHT CLINICAL DEMONSTRATIONS, chiefly on METHODS OF EXAMINATION OF THE NERVOUS SYSTEM, in the Wards at 10 A.M. on Tuesdays and Fridays, if sufficient entries are received. The fee for this Course will be £2 2s. (commencing Tuesday, May 19th).

Mr. Armour and Mr. Sargent operate at the Hospital on Tuesday and Friday mornings at 9 A.M., or at such other times as may be announced.

Any part of the Course may be taken separately. Special arrangements will be made for those unable to take the whole Course.

Fees should be paid to the Secretary of the Hospital at the office on entering for the Course.

J. G. GREENFIELD, Dean of Medical School.

UNIVERSITY OF LIVERPOOL POST-GRADUATE LECTURES. (At 3.30 P.M.)

TUESDAY, May 26th.—(At the Southern Hospital.) Dr. N. Chamberlain: Aneurysm of the Aorta.

WEDNESDAY.—(At the Northern Hospital.) Dr. Murray Bligh: Pleural Effusion.

THURSDAY.—(At the Stanley Hospital.) Mr. Heaney: Surgical Cases.

FRIDAY.—(At the Royal Infirmary.) Dr. D. Bigland: Medical Cases.

MANCHESTER ROYAL INFIRMARY.

TUESDAY, May 26th.—4.15 P.M., Dr. A. H. Holmes: Aneurysm of the Aorta.

Appointments.

CLOAKE, PHILIP, M.D., B.S. Lond., M.R.C.P. Lond., has been appointed Physician for Out-patients at the Queen's Hospital, Birmingham.

HORSBURGH, P. G., M.R.C.S., L.R.C.P. Lond., D.P.H., Medical Officer of Health, Nuneaton.

YOW, C. W., M.B., Ch.B. Edin., Ophthalmic Pathologist to the Royal Eye Hospital, Southwark.

University of Manchester: DUGUID, J. B., M.B., Ch.B. Aberd., Lecturer in Morbid Anatomy and Histology; SUSMAN, W., M.D. Ontario, Assistant Lecturer in Bacteriology; MACGILL, ELSIE I., M.Sc., Research Assistant in Entomology.

Certifying Surgeons under the Factory and Workshop Acts: COLVIN-SMITH, R. C. M., M.B., B.Ch. Camb. (Cromer), ORR-EWING, A., M.B., B.Ch. Camb. (Silverton, Devon), ROBERTSON, W. G., M.B., Ch.B. Edin. (Lanchester, Durham), CASPER, W. M., M.R.C.S. Eng., L.R.C.P. Lond. (Overton, Flint).

Vacancies.

For further information refer to the advertisement columns.

Ayr, Hospital for Mental Diseases.—Jun. H.P. £300.

Beit Memorial Fellowships for Medical Research.—Jun. Fellowships. £350.

Birmingham, Public Health Dept.—Asst. Tubercular and Sanatorium O. at rate of £500.

Blackburn County Borough.—Asst. M.O.H. and Asst. Sch. M.O. £600.

Cambridge, Addenbrooke's Hospital.—H.P. at rate of £130.

Cambridgeshire Tuberculosis Colony, Papworth Hall.—H.P. £100.

Cancer Hospital, Fulham-road, S.W.—H.S. at rate of £100.

Central London Throat, Nose, and Ear Hospital, Gray's Inn-road, W.C.—Out-patient Registrar.

Charing Cross Hospital, W.C.—Res. Anæsthetist at rate of £100.

Chelsea Hospital for Women, Arthur-street, S.W.—Sen. and Jun. H.S.'s at rate of £120 and £100 per annum respectively.

East Lancashire Tuberculosis Colony and Sanatorium, Barrowmore Hall, Great Barrow, near Chester.—Asst. M.O. £250.

Epsom, The Manor.—Jun. Asst. M.O. £140.

Essex Administrative County.—Sen. Clin. Tubercular O. £750. Also Asst. Tubercular O. £600.

Evelina Hospital for Children, Southwark, S.E.—H.P. £120.

Hackney Union Infirmary.—Jun. Asst. M.O. at rate of £350.

Harrogate Infirmary.—H.S. at rate of £150.

Hoo Rural District.—Part-time M.O.H. £60.

King's College Hospital, Denmark Hill, S.E.—Hon. Radiologist.

Kirkcaldy Hospital.—Res. M.O. at rate of £125.

Lambeth Parish Hospital.—Jun. Asst. M.O. £200.

Liverpool Hospital for Consumption, Mount Pleasant.—Vacancy on Hon. Med. Staff.

London Jewish Hospital, Stepney Green, E.—Asst. Surg. to Ear, Nose, and Throat Dept. Also Asst. Surg. in Gynæcological Dept.

Manchester Northern Hospital for Women and Children.—Sen. and Jun. H.S. £130 and £100 respectively.

Miller General Hospital, Greenwich-road, S.E.—Res. Cas. O. £150.

Monmouthshire County Council.—Asst. M.O. £500.

Oxford, Radcliffe Infirmary and County Hospital.—H.S. and Cas. H.S. Each at rate of £120.

Patna, India, Medical College.—Prof. of Pharmacology, Prof. of Anatomy, and Prof. of Physiology. Each Rs.1200 per mensem.

Queen Charlotte's Maternity Hospital, Marylebone-road, N.W.—Asst. Res. M.O. at rate of £80.

Rochester, St. Bartholomew's Hospital.—Res. H.S. at rate of £250.

Royal Free Hospital, Gray's Inn-road, W.C.—Asst. Cas. O., H.P. Also two H.S.'s.

Royal Northern Hospital, Holloway, N.—Two Asst. Surg. O.'s. Each £75.

Royal Waterloo Hospital for Children and Women, Waterloo-road, S.E.—Cas. O. £150. H.S. and H.P. Each at rate of £100. Also Hon. P. and Asst. in X Ray Dept.

St. Helen's Hospital, Lancashire.—Res. M.O. £250.

St. Marylebone Hospital, Ladbroke-grove, W.—Third Asst. M.O. £300.

St. Paul's Hospital for Skin and Genito-Urinary Diseases, Endell-street, W.C.—Res. M.O. Locum. £10 10s. weekly.

Scarborough Hospital and Dispensary.—H.S. £126.

Sheffield Royal Hospital.—Res. Surg. O. £200.

South London Hospital for Women, South Side, Clapham Common, S.W.—Asst. P.

Victoria Hospital for Children, Tite-street, Chelsea, S.W.—Hon. P. to Out-patients.

West London Hospital, Hammersmith-road, W.—H.P., H.S., Aural H.S., and Res. Cas. O. Each at rate of £100.

Windsor, King Edward VII. Hospital.—R.M.O. £200. Also Jun. H.S. at rate of £100.

The Chief Inspector of Factories, Home Office, London, S.W., announces a vacant appointment at St. Just, Cornwall.

Births, Marriages, and Deaths.

BIRTHS.

BROSTER.—On May 13th, the wife of L. R. Broster, M.Ch., F.R.C.S., of Wimpole-street, W., of a daughter.

DEATHS.

BALY.—On May 16th, at the Medical Superintendent's House, Lambeth Hospital, Charles Baly, retired dental surgeon, late of Harley-street, aged 79.

BLUMER.—On May 12th, at a nursing home in London, William Percy Blumer, F.R.C.S. Edin., late of Muswell Hill and Sunderland, aged 70 years.

CHRISTOPHERSON.—On May 11th, Cecil Christopherson, surgeon, of St. Leonards-on-Sea.

GILLINGHAM.—On May 15th, at High-road, Chiswick, Alfred Gillingham, M.R.C.S., L.R.C.P., aged 77.

TOOTH.—On May 13th, at The Moat, Hadleigh, Suffolk, Howard Henry Tooth, C.B., C.M.G., M.D., F.R.C.P., late of Harley-street, aged 69.

WILSON.—On May 8th, at York, J. P. A. Wilson, F.R.C.S. Edin., late Principal Medical Officer, Johore, aged 66.

N.B.—A fee of 7s. 6d. is charged for the insertion of Notices of Births, Marriages, and Deaths.

THE King has approved of the reappointment of Sir David James Galloway, M.D. Edin., to be an Unofficial Member of the Executive Council of the Straits Settlements.

BATH: OPENING OF ULTRA-VIOLET RAYS DEPARTMENT.—On May 16th the new ultra-violet rays department at the Royal Baths, Bath, was opened by Dr. Leonard Hill, who spoke of the now recognised value of artificial sunlight in combating the many ailments of our smoke-bound islands, and described the action of the ultra-violet rays. Speaking of the importance of sun and air in hospital treatment, Prof. Hill said the idea of a hospital of five or six stories was out of date. Hospitals should be built on the bungalow plan, where the patients could be run out on to a verandah or on to a grass plot. The Mayor of Bath, Alderman C. Chivers, J.P., presided at the ceremony and among the guests were many medical men. Councillor C. H. Hacker moved a vote of thanks to Dr. Hill, which was seconded by Dr. Gordon F. Thomson.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

CONTRIBUTORY PENSIONS BILL.

Mr. N. CHAMBERLAIN, Minister of Health, in moving the second reading of the Widows', Orphans', and Old Age Contributory Pensions Bill on Monday, May 19th, said it lay in the direct succession of a long line of measures passed during the past 30 years all founded on the fact that a state of society in which a large part of the population no longer themselves produced the necessaries of life, but depended on continuous employment in other occupations to obtain the means of purchasing—a state of society which involved constant menace and risk to the security of the worker—involved a corresponding need for providing against that risk. Every one of those Acts had been extended and expanded. Taking all those measures together, they effected in a short space of time a profound and revolutionary change in the status of the workers of this country. But there still remained one gap in the chain—one link missing, because although the widow of a man who had lost his life in pursuing his trade or occupation was now provided for, accidents of that kind were fortunately so rare that with the possible exception of the mining industry they hardly entered into the calculation of the ordinary individual. There was undoubtedly something very attractive in the idea that they should have one single contribution on one single card which would entitle the contributor to all the benefits comprised in the existing scheme of national insurance combined with workman's compensation, widows' pension, and old age pension at an earlier age. But though the Government had given serious and prolonged consideration to this point they had come to the conclusion that it was impossible to include workman's compensation. For reasons of economy it was obviously undesirable to set up new machinery, and the Government had chosen to link up the new scheme with health insurance chiefly on the ground that health insurance covered so much wider a field than unemployment insurance. And so the new scheme was interlocked with the National Insurance Act. They proposed to invite the assistance of the approved societies in providing certificates by virtue of which a man would become entitled to benefits. The pensions would be paid through the Post Office, and it was not anticipated that the cost of administration would be more than 2 per cent. of the contributions. Section 3 of the National Health Insurance Act dealt with medical benefits. Under that Act a person who was insured and had reached the age of 70 was entitled to free medical benefit for the rest of his life. But supposing he had only reached the age of, say, 65 and ceased to be employable, and therefore passed out of insurance, he lost the right to medical benefit. That was a considerable grievance, and the present Bill allowed that to be amended by providing that in future insured persons who reached the age of 65 would have the boon of medical benefit for the rest of their lives. The persons who were not insured at all were left out of the scheme not on any ground of principle, but because they could not find any way of fitting them in. It was estimated that in the first ten years the burden which this scheme would impose upon employers would amount to £10,250,000 a year, not a sum which he thought they would trouble about much if it stood by itself, but it had to be taken in conjunction with the already heavy burdens of taxation, Imperial and local, and all the other social services which they had to meet. But he believed that every employer would agree that the psychology of the workman had a very marked effect upon his output. If that were so surely employers ought to welcome this scheme which did so much to provide against one or more of those contingencies which were most dreaded by their workmen. This scheme would reduce unemployment by getting the older men and women out of industry. He had made inquiries and his department estimated that there would be an immediate relief to the rates of something like £3,000,000 a year which would gradually rise until it got to something like £7,000,000—a substantial relief. The Government's policy was to use the great resources of the State not for the distribution of an indiscriminate largesse, but to help those who had the will and desire to raise themselves to higher and better things. That policy was embodied in the Housing Act of 1923 and also in the present Rating and Valuation Bill, where for the first time they were trying to set up a standard by which they could measure the ability of local authorities to bear their burdens and the need they might have of assistance from the central authority. They would also find this principle in the measure which he hoped to introduce next year for the reform of the Poor-law, and for the more scientific and equitable distribution of public assistance.

Mr. WHEATLEY moved:—

"That this House, while it would welcome a just and generous scheme of widowed mothers' and orphans' pensions with a reduction of the age of qualification for old age pensions and the removal of the means limit, declines to give a second reading to a Bill which exacts contributions from wage-earners and imposes an additional burden on industry, makes no provision for a large number of widows and orphans and families where the father is incapacitated and, in the case of those qualified to become recipients, provides allowances which are wholly inadequate."

Speaking in the adjourned debate on the following day,

Lieut.-Colonel FREMANTLE said that while in the meantime he supported this magnificent measure of social reform he felt that they were wasting money by giving pensions rigidly to those who were 65 years of age. This point was likely to be of some importance in the future. The Government's Actuary's tables were based on the state of life tables and the mortality rates were diminishing every year. They were likely to go on diminishing for some time. In the course of the next 40 years the number of people between 65 and 70 years of age would have nearly doubled. Not only had the expectation of life increased, but the length of working life had also been increased. He foresaw a future time when people would live to 90, 100, or more. What was the position going to be then? The present pension scheme permanently threw people out of work at 65. He was sure that in future the pension scheme ought to be on a disability basis. Just as they had in the war disability decided by a board, so in civil life disability should be decided by a medical board, diluted by such other elements as might be required. It should, however, be a professional technical board to decide disability.

The amendment was rejected by 401 votes to 125 and the Bill was read a second time.

HOUSE OF LORDS.

TUESDAY, MAY 19TH.

Procedure in Coroners' Courts.

Lord DARLING raised the question of the procedure in coroners' courts and called attention to the not infrequent practice of holding inquests on the bodies of deceased persons simultaneously with the hearing by justices of charges against persons arrested and accused of causing the death of the same deceased persons. He suggested that if at any inquest the coroner was informed, before the jury had given their verdict, that some persons had been charged before the justices with murder or manslaughter of a dead person, then, in the absence of good reason to the contrary, it should be the duty of the coroner to adjourn the inquest. When the whole case had been thoroughly investigated and brought to an end, a merely formal meeting of the coroner and his jury would result in returning a verdict which would have no effect beyond regularising the proceedings.

The LORD CHANCELLOR agreed that a certain amount of mischief ensued at present in these cases, and as the practice was that one witness of the tragedy might have to give his evidence no less than four times, great expense was involved, while the case of the accused man was sometimes prejudiced because the inquest took place while the police court proceedings were going on. The Government proposed to introduce a Bill dealing with the whole question of coroners, and a number of other matters which had arisen in connexion with inquests. The Bill would be found to contain a clause very much to the effect suggested by Lord Darling. The Bill was ready, and was only awaiting approval by some local authorities in connexion with financial matters. He hoped that within a very short time the Bill would be introduced and passed into law.

HOUSE OF COMMONS.

WEDNESDAY, MAY 13TH.

Wages and National Health.

Mr. MORGAN JONES moved that, "in view of the practically universal acceptance of the principle that a living wage for all workers should be the first charge upon industry, and in view of the large measure of agreement with respect to the advisability of fixing legal minimum time rates of wages reached at the National Industrial Conference, this House urges the Government to proceed without delay with the Bill introduced by the Government of the day of 1919, constituting a commission to inquire into and report upon legal minimum time rates of wages."

Mr. JOHN BAKER seconded the motion.

Dr. HADEN GUEST, in supporting the motion, said he wished to place before the House certain purely medical considerations, certain considerations dealing with human life, and certain considerations dealing with wages which he suggested should be taken into account when considering how a minimum wage was to be calculated. They were all

familiar with the appeals for funds made by the numerous hospitals in London. During the last few days they had been distressed to learn that the Middlesex Hospital was in a very bad position and needed a large sum of money. If they added to the money spent upon the voluntary hospitals the money spent upon Poor-law infirmaries and on medical relief through the Poor-law, and further the amount spent upon clinics of one sort or another, they arrived at a sum running into many millions a year. A large part of that expenditure was part of the price the country had to pay for compelling men to live on low wages. If hon. Members would go to Guy's Hospital, which derived a large proportion of its patients from occupations where there was casual employment and low wages, they would see how those people suffered directly from the effects of underpayment and insufficient food. In his own experience in connexion with school clinics in London he had found the same thing. The figures went down during the war because separation allowances were being paid and for the first time in their lives—and apparently for the last time—a large number of people were receiving regularly week by week a definite amount of money, with the result that there was a great diminution of illness among children and a consequent decrease in the cost of treatment by the London County Council, the largest educational authority in the country. A large amount of what was called mental as well as physical deficiency had its origin in poverty. Those mental and physical defectives, when they reached adult age, were in one way or other a charge upon the community. He did not wish to exaggerate or to suggest that all these cases were due directly to the underpayment of the fathers and mothers of the patients, but a considerable proportion undoubtedly were so. He judged that the country paid a great deal more for the cost of medical treatment year by year than would make up the wages paid in industry to a decent minimum wage. Some employers had good intentions, but other employers had anything but good intentions, and, what was worse, they were simply indifferent to the economic effect of their enterprises on the workers. He confessed that he never felt more revolutionary than when he went down to his own clinic in Blackfriars and saw the children coming up for treatment—children who presented the same kind of illnesses, malformation and bad development as when he began his work there 18 years ago. Those children had good fathers and mothers, so far as morals and care of their children were concerned, but they earned so little that they could afford but a bare minimum of room, and a bare minimum of food, and only just sufficient clothing to keep their children decent enough to send to school. Almost as regularly as they went to school such children had to visit a doctor for maladies which were absolutely preventable. Years ago the medical officer of health for Essex made a detailed investigation of the deaths from measles in the county, and he found that while that death-rate was high for the county as a whole it was confined to children of the working classes. The terrible death-rate from infantile illnesses, from tuberculosis, and generally the illnesses that were indices of poverty, fell almost entirely on the lives and homes of poor people who were underpaid under our present system. He hoped that the inquiry sought for in the motion would be granted, and that when it was attempted to define the level of a minimum wage consideration would be given to medical and physiological questions which men and their families required.

Mr. BETTERTON (Parliamentary Secretary to the Ministry of Labour) said that the policy of the Government was that they adhered to the principle that the gross evil of sweating must be prevented, and they endorsed the view reached unanimously by the Committee presided over by Lord Cave that the Trade Board system was necessary for this purpose. But while the Trade Boards Act would be extended it would only be extended to new trades where it had been clearly ascertained by systematic investigation that conditions of sweating prevailed. If powers were entrusted to any body of men, however faithfully they might attempt to discharge their duties, to fix a minimum wage for every industry in the country, so far from producing anything like contentment and peace it would produce an outcry and uproar of which they could form but a dim notion. In the view of the Government, therefore, it was impossible to accept the resolution.

The motion was rejected by 227 votes to 132.

Night-Work in Bakeries.

Lord HENRY CAVENDISH-BENTINCK asked the Minister of Labour whether the British Government delegates to the International Labour Conference at Geneva this month had been instructed to move an amendment to the present draft on night-work in bakeries that would enable them, if carried, to vote for the convention.—Sir A. STEEL-MAITLAND replied: The Government have tabled certain amendments to the draft convention on night-work in bakeries, and have informed the International Labour Office that subject to these amendments being carried they would be disposed to accept the Convention, provided they could be satisfied that the effect of its adoption would not be to cause an increase in the price of bread to the consumer. Since that time the Royal Commission on Food Prices has examined this question and in view of its findings the delegates will state that the Government is unable at the present time to ratify the draft Convention.

THURSDAY, MAY 14TH.

Coroners and Inquests on Motor Accidents.

Rear-Admiral BEAMISH asked the Home Secretary if he was aware that considerable dissatisfaction existed in consequence of inquests on persons killed by motor vehicles being held without a jury; and could he see his way to introduce legislation compelling coroners to empanel a jury at every inquest into the death of a person as the result of a road accident.—Sir W. JOYNSON-HICKS replied: The subject has engaged my attention, and provision will be included in the new Coroners' Bill.

Education of Blind and Crippled Children.

Mr. GROVES asked the President of the Board of Education the number of blind and crippled children, respectively, throughout the country for whom no educational provision is made; and what action he proposed to take with local educational authorities who refused to meet their obligations in this matter.—Lord E. PERCY replied: According to the returns of local authorities in England and Wales for the year ended Dec. 31st last, there were 567 blind children (including 287 partially blind) and 4301 crippled children (other than those suffering from active non-pulmonary tuberculosis) attending no recognised school or institution during the year. I may, perhaps, mention that large numbers of the crippled children not at present in special schools do not need to attend such schools, but rather require orthopædic treatment which will enable them to continue in attendance at ordinary public elementary schools, and I am taking all practicable steps to encourage the development of such treatment. As regards special school accommodation for blind and crippled children who need it, I have already asked all authorities to give their careful attention to the problem and to inform me what progress they are making.

Clinics for Physically Defective Children.

Mr. GROVES asked the President of the Board of Education the number of local education authorities who had not established clinics for the treatment of physically defective children; and what action he proposed to take if those authorities continue to refuse to make adequate arrangements.—Lord E. PERCY replied: Out of 318 local education authorities only seven have not yet provided any school clinics, and of these seven, five have submitted proposals which are now before my department. One of the remaining two cases is that of a small area where no clinic is required, and in the other case the authority have been requested to give the matter their urgent attention. I do not, of course, desire to suggest that in all cases the arrangements made in this respect are entirely adequate.

Mr. PALING asked the President of the Board of Education what provision was made by the West Riding (Yorks) county council education authority for the training of mentally defective children of school age; and whether such provision was sufficient to meet the needs of the area.—Lord E. PERCY replied: According to returns furnished by the West Riding local education authority for the year 1924, there were in the area 528 children ascertained to be mentally defective within the meaning of the Education Act, 1921. The local authority have no school of their own for mentally defective children, but they have sent 23 children to special schools certified by the Board.

X Ray Examination and National Insurance.

Mr. BASIL PETO asked the Minister of Health whether his attention had been called to the fact that the assistance of X ray examination was not one of the benefits provided under the National Health Insurance Act; and, seeing that this was now essential to correct a diagnosis in many cases, and in view of the fact that the development of radiography was approximately coeval with the Act, he would amend the Act to give the advantages to insured persons. Mr. SMITHERS asked the Minister of Health a similar question.—Mr. N. CHAMBERLAIN replied: Payment for an X ray examination can at present be made under the National Health Insurance Act only where the examination is incidental to a service, such as dental or hospital treatment, made available to members under an approved society's scheme of additional benefits. The question of any extention or development of the benefits of the Act is now under consideration by the Royal Commission on National Health Insurance to whom I am forwarding my hon. friend's suggestion.

Butter for Asylum Inmates.

Colonel DAY asked the Minister of Health whether he was aware that the Metropolitan Asylums Board had recently decided to discontinue the supply of butter to inmates during the summer months on the ground that, whilst butter contained the vitamins necessary for bodily health, this form of food was to be omitted during the summer months as sunshine supplied the vitamins required; and would he recommend that the allowance of butter be continued irrespective of season.—Mr. N. CHAMBERLAIN replied: I am advised that the use of margarine is quite compatible with a good diet, provided that the other constituents of the diet are satisfactory; and that the dietary adopted by the Metropolitan Asylums Board satisfies this condition, and further makes adequate provisions for adjusting the diet to suit the needs of any particular case. In these circumstances, I could not properly intervene in the manner suggested.

Inequalities in Insurance Benefits.

Mr. KELLY asked the Minister of Health if he was aware of the inequalities which would arise on July 6th, 1925, as a result of the division of the valuation of approved societies under the National Health Insurance Acts into two sections, whereby that section whose valuation took place in 1922 would be in a position to distribute additional benefits, if any were due, to their members a year in advance of the societies valued in 1923; and could the question be considered of postponing the coming into operation of the additional benefits declared in respect of societies valued in 1922, so that all additional benefits of all societies would come into operation on the same date, thus removing inequalities.—Mr. N. CHAMBERLAIN replied: Such inequalities as are suggested in the question are merely temporary, and the present arrangement has been agreed to by the consultative council which is representative of approved societies as being the best method of procedure and for the valuation of some 9000 societies and branches. As regards the second part of the question, the work in connexion with valuation and the preparation of schemes by approved societies necessitates an interval of 2½ years to elapse between the date of valuation and the date on which members begin to enjoy the additional benefits provided as the result of the valuation, and I do not think it desirable that this interval should be prolonged by another year.

Pay of Officers in the R.A.M.C.

Colonel DAY asked the Secretary of State for War whether any difficulty had been found in recruiting doctors into the Royal Army Medical Corps on account of the poor rates of pay offered qualified medical men; had any increase on the standard rates now operating been considered; and, if so, what was the scale of pay suggested.—Sir L. WORTHINGTON-EVANS replied: The number of candidates for commissions in the Royal Army Medical Corps has declined owing to a variety of causes. Proposals regarding the rates of pay of medical officers are being considered, but I am not at present able to give details.

MONDAY, MAY 18TH.

Pay of Medical and Dental Officers in India.

Major-General Sir RICHARD LUCE asked the Under Secretary of State for India if the married officers of the Royal Army Medical Corps, the Royal Army Veterinary Corps, and the Army Dental Corps, serving in India, were still excluded from the increased pay and allowances, including quarters, recently granted to other branches of the British Army, by which exclusion a major of the Royal Army Medical Corps received 75 rupees per month less than a senior captain of the Royal Engineers, and five rupees less than a captain of the Royal Army Service Corps; and if he would assure the House that members of these three services would not eventually suffer by reason of the delay involved in the consideration of their case.—Earl WINTERTON replied: The case of the services mentioned has been reserved for separate consideration in view of the possibility of changes affecting them in the near future. If the examination of the cases reveals sufficient grounds, increases will be given from such date as may be appropriate.

Statutory Vaccination Declarations.

Mr. GROVES asked the Home Secretary if his attention had been called to the refusal of certain magistrates to witness statutory declarations under the Vaccination Acts; and would he follow the precedent of one of his predecessors and circularise all magistrates, calling their attention to their legal obligations to witness statutory declarations when sitting in open court, and expressly pointing out to them that they were neither required nor authorised to cross-examine applicants as to the reasons for their objections but that their conscientious objections were sufficient.—Mr. LOCKER-LAMPSON (Under Secretary to the Home Office) replied: Yes, Sir, on March 17th my right hon. friend received a deputation from the National Anti-Vaccination League which made representations to him on the subject. After carefully considering the particulars submitted by the League, he came to the conclusion that no case had been made out for the issue of a circular to justices. The Home Secretary does not, therefore, propose to issue one.

TUESDAY, MAY 19TH.

Danger of Infant Foods.

Mr. GROVES asked the Minister of Health whether he would consider the possible danger to infant life arising from the sale of proprietary infant foods consisting largely of starch and flour; and whether he would introduce regulations governing the sale of such foods, in view of the fact that he had issued instructions controlling the sale of dried milks.—Sir KINGSLEY WOOD replied: My right hon. friend is sure that misleading claims are sometimes made as to the value of infants' foods, consisting largely of starch, but he is not satisfied on the information at present before him that there is sufficient evidence of danger arising to public health to justify the issue of regulations at the present time.

Mr. B. SMITH asked if the hon. gentleman would circulate through the medical side of the Ministry of Health the names of the applicants who largely embodied starch in so-called foods.—Sir KINGSLEY WOOD replied: I do not see the necessity to do that. The consumption of these proprietary foods is decreasing.

The Sale of Patent Medicines.

Colonel DAY asked the Minister of Health whether his attention had been drawn to the dangers arising from the unrestricted sales of certain patent medicines, where the manufacturers were not compelled to state the composition of the products bearing their labels; whether he proposed to take any action in the matter to further protect the public; and would he introduce legislation to compel all manufacturers of patent medicines to state plainly on the labels of medicines sold the ingredients contained in them.—Sir KINGSLEY WOOD replied: My right hon. friend fully appreciates the importance in the interest of public health of securing some statutory regulation of the conditions under which patent medicines are advertised and sold, but in the present state of business he does not anticipate that it will be possible to introduce legislation on this subject during the present session.

PANEL DOCTORS' FINE.—Our Manchester correspondent writes: The decision of the Ministry of Health to waive more than half of the fine of £1000 imposed on two medical men at Tottington, Lancs, for breaches of the panel regulations has produced a good impression here. It is understood that £450 has already been deducted from the quarterly remuneration of the doctors in payment of the fine. The Ministry, in intimating its decision to the Lancashire Insurance Committee, states: "Regard has been paid to the fact that the practitioners have expressed regret for the breach of the terms of service and have undertaken to observe them carefully in future. Also weight has been given to the consideration that the action taken in this case has been sufficient to make clear the very serious view taken of the practice of charging fees to insured persons for treatment which practitioners are bound to render free of charge."

INTERNATIONAL CONGRESS OF RADIOLOGY.—The preliminary programme for this Congress, which will be held in London from July 1st to 4th, has reached us. The number of papers to be read is large and the list of those taking part is representative of workers in all countries. The work of the Congress will be divided into three sections—namely, radiology, physics, and electrotherapy and physiotherapy. The radiology section will probably meet in two parallel sessions each day, the subjects for this purpose being divided into those bearing on diagnosis and those bearing on therapy. On the opening day the sections of radiology and physics will meet in joint sessions for a discussion on the standardisation of dosage, which will be opened by Prof. W. Bragg from the physical standpoint, and by Dr. Béclère, of Paris, from the medical. On the evening of that day the Silvanus Thompson Memorial lecture will be delivered by the Duc de Broglie, of Paris, his subject being Absorption of *X* and *Y* Radiations and the Secondary Radiations which Accompany Them. On the second night a Congress dinner will be held, and on the third night Sir Berkeley Moynihan will deliver the MacKenzie Davidson Memorial Lecture, his subject being the Relationship of Radiology and Surgery. Further details will be published shortly.

Notes, Comments, and Abstracts.

THE AUXILIARY HOSPITAL.

ITS FINANCIAL ASPECT AND THE EXTENT TO WHICH IT CAN RELIEVE PRESSURE UPON PARENT HOSPITAL BEDS.*

BY F. N. KAY MENZIES, M.D., F.R.C.P. EDIN.,
DIRECTOR OF HOSPITAL AND MEDICAL SERVICES, JOINT RED CROSS COUNCIL;
AND
R. H. P. ORDE, B.A.

THE outstanding characteristic of an auxiliary hospital (or recovery home) by contrast with what we may conveniently call the parent hospital is that it is an institution to which patients can properly be sent for whom it is no longer necessary and, in fact, uneconomic, to continue under treatment in the parent hospital; but who for medical reasons are unfit to be sent either to a convalescent home or their own homes. Generally speaking, auxiliary hospitals are best situated in the country or at the seaside, and are much less costly from the point of view of buildings, staff, equipment, and cost of maintenance than the parent hospital; although, on the other hand, for similar reasons, they are more costly in all these respects than what are commonly called "convalescent homes."

The type of patient to be admitted to such an institution is illustrated by the schedule of cases. Out of a total number of cases transferred (402) from a parent hospital during the months December, 1924, and January and February, 1925, we have selected the following as typical:—

Pneumonia	33	Nephritis	9
Alimentary ulcers:		Rheumatism	9
Gastric, pyloric, duodenal	24	Gall-bladder	8
Appendicitis	66	Wounds and bruises	7
Heart conditions	16	Fractures	9
Debility	7	Gynæcological	23
Gastritis	7	Ear, nose, and throat	42
Tuberculous	15	Eye	13

Reported Shortage of Hospital Beds.

Practically every local voluntary hospital committee in England and Wales has reported that additional voluntary hospital accommodation is needed, although, as might be expected, the kind of institution and the additional number of beds required, as well as the type of disease for which there is a deficiency of accommodation, vary very considerably. The outstanding fact which emerges from a consideration of all these reports is that some thousands of additional hospital beds are said to be required in England and Wales, taken as a whole. It is surely well worth while making careful inquiry into the question as to which is the cheapest way in which this additional accommodation can be provided from the point of view of: (*a*) Capital expenditure; (*b*) cost of maintenance; (*c*) the best interests of the patient. A number of witnesses giving evidence before the Scottish Commission have recommended the provision of auxiliary hospitals, in order to relieve the pressure upon the parent hospitals. On the other hand, in England one of the largest and most important of the local voluntary hospital committees has expressed the following view:—

> The provision of recovery beds, where patients receive hospital treatment and not convalescent home treatment, does increase the number treated, to approximately the same extent as the provision of an equal number of additional beds on the site of the parent hospital. The idea that extension by recovery beds is cheaper than extension by hospital beds rests almost wholly on an illusion. Recovery beds may cost £2 2*s.* a week, while beds in the parent hospital cost £5 5*s.* a week. But this is only because the cost of a hospital bed, where there are no recovery beds, includes all the stages of treatment, whereas, if there is a recovery branch, the hospital beds are confined to the more expensive stages and the recovery beds to the less expensive. Thus, if the cost of the single institution averages £4 a week, this is made up of so many days averaging (say) £6 a week, so many averaging £5, so many averaging £3, and so many averaging £2. If the whole of the days averaging £3 and £2 a week are spent at a recovery branch, the average cost at that branch may well be between £2 and £3 a week, while the average cost at the parent hospital rises to between £5 and £6. But this does not mean that the combined average cost has altered in the least.
>
> There may be a saving in capital expenditure and in some items of maintenance, but, on the other hand, there will be some extra cost of separate administration and of transport.
>
> The advantage of a recovery branch, as compared with extension on the hospital site, lies, therefore, solely in the benefit to the individual patients, not in any increase in the number treated for the same amount of money.

It will be seen that this Committee is of the opinion that altogether apart from questions of capital expenditure and extra cost of separate administration and transport, there would be no economy in so far as *maintenance* is concerned. if the additional hospital accommodation needed is provided by means of auxiliary hospitals rather than by the addition of a similar number of parent hospital beds.

Real and Apparent Shortage.

Before considering the comparative cost of maintenance, there are two important questions which should be borne in mind, viz.: (1) To what extent are beds in parent hospitals now occupied by patients who have reached a stage in their treatment when they may be expected to progress towards recovery equally well, if not indeed more rapidly, at auxiliary hospitals situated in the country or at the seaside. (2) To what extent would there still be a real shortage of beds in our parent hospitals, if all those patients found suitable on medical grounds for transfer to auxiliary hospitals were so transferred at the earliest possible date.

These two questions must be answered before even an approximate estimate of the real shortage of beds in our voluntary hospitals in this country can be arrived at.

There should be no difficulty in arriving at an answer to the first question. If a careful investigation of all the beds occupied in our general and special hospitals were to be made by competent persons, it would be found that there are always some beds occupied by patients for whom the parent hospital has done all that can reasonably be asked of it. They have not been discharged for one of two reasons: (1) The patient is not yet really fit enough to go direct home or to a convalescent home; (2) there is no other suitable institution to which the patient can be sent, for the convalescent home, as a rule, is not built, equipped, or staffed in such a way as to be able to relieve the parent hospital of the type of case at the stage of treatment which we have in mind. If then it be true that there is a certain wastage or uneconomic use of beds in the parent hospitals, and this wastage can be reduced by the provision of an equally suitable type of institution, called an auxiliary hospital, then it is surely of first-rate importance to make a careful inquiry into the accuracy of the statement that "the idea that extension by recovery beds is cheaper than extension by hospital beds rests almost wholly on an illusion."

The second question is more difficult to answer. In each area the conditions vary sometimes considerably and calculations based upon 2, 3, or 4 beds per 1000 of the population have a very limited value. Waiting lists, however carefully kept, although useful, cover a comparatively small portion of the ground. Experience has taught us all that in cases where additional hospital accommodation of one kind or another is provided, a most surprising demand for such accommodation springs up from all kinds of unexpected quarters. Consideration also has to be given to the extent to which public health authorities and Poor-law guardians in various parts of the country are fulfilling their statutory obligations.

Is the Alleged Economy of Recovery Beds Illusory?

Is it true to say that the idea that extension by recovery beds is cheaper than extension by hospital beds rests wholly on an illusion? This is the considered opinion of a committee which represents an area containing some 12,000 to 13,000 beds, and in which there is an estimated shortage of 2000 beds. There are two methods under consideration, by which this shortage can be met: Scheme A—By adding, to the existing hospitals, wards containing beds to the required number. Scheme B—By providing 2000 beds in homes of recovery in neighbouring country districts.

[The authors here examine these alternative methods in some detail and conclude:]

It appears from the figures we have obtained, that the effect of converting 15 per cent. of the beds of a hospital from a three-week to a two-week service upon the average weekly cost of each patient is by no means so great as is suggested in the paragraph which we have quoted. If our conclusion is correct and we apply it to the area in question, the costs under Scheme A and B work out in this way:

Scheme A.				Per week.
13,000 existing beds.				
2,000 additional hospital beds.				
15,000 at average cost of £3 per patient per week				£45,000 0 0
Scheme B.	£	*s.*	*d.*	
13,000 existing beds at a cost of £3 1*s.* 1½*d.* per patient per week	39,731	5	0	
2,000 beds in recovery homes at £2 per patient per week	4,000	0	0	
				£43,731 5 0
Or a weekly saving of				£1,268 15 0

Equal to £65,975 per annum.

* Abstract of a paper introducing a discussion at the Annual Congress of the Incorporated Association of Hospital Officers on May 15th.

If in place of a weekly average cost of £3 in the main hospital, a weekly average cost of £3 10s. is assumed, the saving on Scheme B as compared with Scheme A amounts in each week to £2214 11s. 8d., or £115,158 6s. 8d. per annum. Such data as are available tend to show that there is at least prima facie evidence in favour of the "idea" which has been described as illusory. We are indeed unable to accept the view that expenditure at a parent hospital rises with the rapidity of the passage of the patients through its beds, at such a rate as to balance the lower cost of the beds in an auxiliary hospital. We hold that the unavoidable expenditure, at every large and expensively staffed and equipped general hospital, that is altogether independent of the stage of treatment of a patient, or even of the occupation of the bed at all, far outweighs any differences in cost between first, second, or third weeks of treatment. At the same time, even if it should be true that the "idea" to which we have so often referred, rests on an illusion, it by no means follows that extension by auxiliary hospitals is an economically illusory proposition.

The Economic Use of Parent Hospital Beds.

It has been well said, by the committee already referred to, that "the addition of a recovery branch centres in the parent hospital a larger number of patients who need expensive methods of diagnosis, operations, and other early stages of treatment, and thus enables fuller use to be made of the highly specialised staff and apparatus, thereby reducing cost and increasing efficiency of service. But this result is only produced if the staff and apparatus are not already fully employed, and in that case would be produced by the addition of beds on the hospital site."

What meaning, however, are we to attach to the words "fully employed"? for upon this depends almost entirely the case for or against the auxiliary hospital. The modern parent hospital is so situated, built, staffed, and equipped that cost is only reduced to a minimum and efficiency raised to a maximum when it is engaged upon work of a highly specialised character. Any individual bed, therefore, occupied by a patient who no longer requires the services which only such a hospital can give is being used uneconomically. The bed is employed, it is true, but not *fully employed* in the economic sense. Can it be said of any large general hospital that there are no patients in its beds who could not, without detriment to their treatment, be transferred to auxiliary hospitals if such existed?

In the 12 large general hospitals in London with medical schools, the average number of days each patient was resident during 1923 was 19·57, and the variations ranged from 26·40 to 14·41. It is noteworthy that at the hospital in which the average stay was 14·41 a recovery branch has been established, and that the combined cost per occupied bed at this hospital and its home of recovery is nearly £3 a year lower than at the parent hospital itself.

In the 14 provincial hospitals with medical schools, the average length of stay of a patient varied during 1923 from 27·98 to 15·05 days. It is a fact that at the hospital at which the stay was 15·05 days, a return was made of the total number of days of residence of seven long-stay patients. This total was equal to the time necessary for the treatment of 40 patients suffering from hernia or hæmorrhoids. The long-stay patients were retained because there was no accommodation available to which they could be sent, and for no other reason. It is hardly possible to imagine a more uneconomic use of parent hospital beds.

In Scotland, at the six large hospitals with medical schools the average length of stay of a patient varied from 25 to 20·29 days.

The character of the work undertaken at these large hospitals throughout the country and the scale upon which they are staffed and equipped, does not explain the variations in length of the patient's residence. Even if we assume that at those hospitals in which the average stay approximates two weeks the staff and apparatus is already fully employed in the true economic sense, we cannot assume the same with regard to those at which the length of stay is a week or 12 days longer. Indeed, it is common knowledge that even at the busiest hospitals a surgeon frequently retains a patient in his ward simply because there is no suitable accommodation to which he can be discharged, and not because to admit another patient in his place would be to throw too great a load upon himself or the staff of the hospital.

The economic use of operating theatres, such as are provided at all large parent hospitals, is limited by the number of beds available for patients operated on, and if any of these are occupied by those who could be transferred to a recovery branch, the theatre is not being used to its fullest possible extent, and so with all the other specialised buildings and departments. When the point has been reached, by means of recovery branches, at which the beds of a parent hospital are being used to their fullest extent for the purpose for which they are best adapted, then it is time to develop and extend wards, operating theatres, and other special departments. It can never be an economic proposition to add beds to the parent hospital and utilise them for the retention of patients a moment longer than is absolutely necessary. And we are of opinion that this is the true test of whether, in any given locality, extension should be by way of recovery branches or by way of beds at the parent hospital.

WOMEN'S HOLIDAY FUND:
WANTED A NEW HOLIDAY HOME.

To the Editor of THE LANCET.

SIR,—We make an earnest appeal to all concerned with the health and welfare of the coming generation to help the Women's Holiday Fund to raise the sum of £4000–£5000, necessary for the purchase and equipment of a house to be used as a holiday home for mothers and babies. The Women's Holiday Fund have recently had to terminate the lease of their home at St. Leonards-on-Sea, and are anxious now to buy a house, so as to start a permanent home for what is an important part of their work. All social workers know only too well how often a tired ailing woman has to drag on uncomplainingly at home, when a fortnight's change with good food and fresh air would restore her to health. They also know how difficult it is to secure vacancies at the homes, where not only can such cases be received at a moderate charge, but where the mother and baby are specially cared for—with such excellent results. Donations may be sent to the Secretary, Home for Mothers and Babies, Women's Holiday Fund, 76, Denison House, 296, Vauxhall Bridge-road, S.W. 1.

We are, Sir, yours faithfully,

MARY FITZALAN,
JESSIE P. B. PHIPPS,
MARION VAUGHAN,
HELEN A. POWNALL,
Chairman of Executive Committee.

May 18th, 1925.

A MEMORIAL TO MRS. R. P. WETHERED.

A COMMITTEE has been formed to raise a sum of money to be expended in placing a tablet to the memory of Mrs. R. P. Wethered in St. James's Church, Paddington, which she attended, the surplus to be used in furtherance of the work to which she devoted her life. When Mrs. Wethered died last year, the cause of rescue and preventive work among young persons lost one of its most enthusiastic supporters. For more than 40 years she had laboured unceasingly to save young girls from drifting into evil ways, to raise and elevate the fallen, and to restore those diseased to health and efficiency of mind and body. Subscriptions, large or small, may be sent to the Treasurer, Mr. E. B. Turner, F.R.C.S., at Victoria House, 117, Victoria-street, S.W. 1.

PROSTITUTION IN INDIA.

DURING recent years a certain number of educated Indians who have become imbued with Western ideals have expressed themselves as hostile to the practices which tend to popularise the prostitute's profession. In a recent book on "Crime in India" (Humphrey Milford. 1924. Pp. 169. 8*s.* 6*d.*) Mr. S. M. Edwardes, who was a Commissioner of Police in one of the most important urban forces of India, discusses both the historical aspect and the present-day position of prostitution which, although not strictly a criminal offence, is yet closely connected with crime and police work. There exists in the first place a form of prostitution connected with the traditions and customs of certain religious sects and side by side with this ordinary commercial prostitution is notoriously rife. The ordinary type consists of two varieties: that carried on by Indians and that by European prostitutes, usually of Russian and Eastern European origin. There was at one time in India a Contagious Diseases Act, under which the Indian Government exercised a certain amount of supervision over prostitution, but this was repealed so that no official statistics as to the extent of the practice are available. India has been represented at various conferences held under the ægis of the League of Nations with regard to the traffic in women and children and has actually assented to the fixing of the age of consent at 21. Various private Bills on this matter have been presented to the Indian legislature and it remains to be seen how the politicians will deal with the demands of recent Indian opinion for the restriction of purely commercialised vice, while permitting hereditary harlotry and religious prostitution under the Hindu caste system.

Dr. F. W. Pilkington would like to know of a private home or institution where an elderly lady, infirm, but not mentally afflicted, can be boarded and lodged for £1 weekly.